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INSANITY AND HYSTERIA,

BY

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DANIEL H. KITCHEN, M. D.,

CHIEF OF STAFF

OF THE

HOSPITALS ON BLACKWELL'S ISLAND,

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REPORT OF THE ANNUAL EXERCISES
FOR THE YEAR 1871

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D. H.

LECTURES

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INSANITY.

INTRODUCTION AND GENERAL ASPECT OF INSANITY.

LECTURE NUMBER ONE.

Without any preliminary remarks, we will proceed at once to the subject under discussion.

We well know the arduous and diverse duties of a student of medicine, confined as they are, to within a very short period of time. I will at once ease your minds, by the declaration that although, I would impress upon you the great importance of the subject, I shall not unnecessarily magnify it, but confine our remarks to facts, and to what I believe to be simple truths and principles.

Insanity as a name, not implying either etymologically or otherwise anything to lead to a proper idea of the subject, gave rise in our own as well as in foreign languages, to legions of synonyms, none of which, however, has improved our real knowledge, but rather lead to confusion of a proper definition of the disease, wherefore Insanity has had as many definitions as it had authors. The following which is simple, and I believe most reliable, is one which will not easily lead you astray.

Insanity is a disease of the brain affecting the mind, by which there is a change in the person's mode of acting, thinking, and doing things. This simple but comprehensive definition will lead you at once and safely over a large stumbling block and Babylonian confusion—the great *Mistura Diabolica*—of our subject, I mean its classification. Persons sound in body, acting, thinking and doing things during their path in life in sound coherence with impressions correctly received by external influences through the nervous system, accompany their acting, and doing things with a show of either depressed or exalted feeling, exactly in accordance with these true impressions so received, only modified in degree by their force of will. If these impressions and subsequent demonstrations of acting, thinking and doing things have lasted for a specified time, or if they have been inordinate in force, a relaxation of powers of reception and reciprocate efferent action is the result, sound sleep, but which we may here call as well a physiological dementia. Let us look now at the other possible side. Suppose persons receive by existing influences, through their nervous system, impressions incorrectly or that the brain creates an impression, although no influences exist nor have been brought to bear upon their nerves, and either of these im-

pressions constantly repeating themselves or continuing in action, so that the force of will over them ceases, although understood to be erroneous, the first result will be a depressed feeling or melancholia, which cause and effect constantly re-occurring or continuing, sorrow and depression gives away to exaltation and mania. This frenzy gradually exhausting the life force of the brain, its function as the recipient of impressions and centre of reflex action and thinking ceases, and we come to the third and last stage, pathological sleep or dementia. Now as these three stages constitute a case of Insanity, it is not to be understood that every case runs through these three stages. An insane person may either get well or die in the state of Melancholia, or that of Mania, or Dementia. This being the case, we can assert that insanity, when running its full course, passes through the three stages, but also that it may be classified, so as to say that this or that case is one of Melancholia or Depression, or of Mania or Exaltation, or of Dementia or Mental weakness, and that the disease may terminate fatally or favorably in either. We would not scientifically say, this man died of Mania but of Insanity, just as we would not fill up a death certificate of a man having died of pneumonia with cause of death:—Hepaticization of the Lungs. Aside from the three phases of Insanity we have to consider a fourth, without associating it with the other three, as it neither has the same pathological progression and prognosis, nor can the same general treatment be permitted—I mean general progressive Paralysis or Paresis—a disease where the physical and psychical forces of man join hands, wasting steadily and gradually away, till the last cinder of their existence dies out, leaving but the wreck of a once active and reasoning man to the yawning grave.

Before going further, we will present a few remarks on the history of Insanity. It was known to the ancients, and we have medical records of cases from Hippocrates and Galen to the present time. In ancient times and the middle ages the general mass of the people were so infatuated with superstitious notions, that no scientific research even when successful could be brought to light. The poor insane were not only subjected to the most barbarous treatment, but often looked upon as evil spirits or sorcerers, and after most inhuman tortures burnt alive at the stake. Imagine a poor lunatic, who unfortunately conceives the idea that he is a prince, or that he owns this or that property, to be put to the rack and tortured to make him confess the contrary of what the very nature of his disease forces him to assert. But not only the ignorant populace and superstitious priesthood exercised this cruel treatment, but the more enlightened and even medical celebrities looked with fear upon an insane individual and used all barbarous means conceivable to make the poor creatures act and do as they would, which these unfortunates were of course unable to do, and when all efforts of force proved of no avail, they chained them to the walls of prison cells, fed them like swine, till merciful God ended their tortures by death. Even the great Cullen treated his patients by forcible opposition and coercion. It was left to the

great Pinel not a hundred years since to bring about a complete change in the aspect and treatment of insanity, which was so successfully followed up and elucidated by his successor Esquirol. Since then Insanity is in all civilized countries looked upon as a disease like any other, and in nearly all institutions for the insane these poor afflicted fellow beings are now treated with the utmost consideration.

Arguing from the stand-point that Insanity is a disease deserving the same consideration which we would give to any other, we will divide the causes like those of other ailments into: 1st, Predisposing, 2d, Exciting. The old notion still adhered to by some writers of arranging the causes into *physical and moral*, I consider unsound and untenable. A cause of a disease, whether of physical or moral character, will only be a cause for such as are susceptible of the developement of it. If a man becomes insane by a sudden mental shock, say sudden loss of a parent, his brothers and sisters however similarly afflicted escaping, it shows that the susceptibility to insanity predisposed that man to the alienation of mind, while it did not affect his kindred. That man would undoubtedly have suffered similarly had he strained his mind by a continued effort to find the square root of a circle.

When we know that among barbarous nations the number of insane is comparatively much less than among the civilized, theoretical considerations, that the climate, form of government and religion, the general occupation and habits which regulate the state of civilization, must more or less influence a feverish activity of life, and therefore of the brain, are certainly allowed; when we consider further that among certain nations, whose multifold industries and constant eager aspirations for competition in all acts of modern civilization, insanity is most prevalent, we are forced to assume that when we cultivate passions and strain our minds for such objects it predisposes us more than others to brain diseases affecting the mind.

Taking this standpoint, the increase of insanity, as proven by records and statistics during the past twenty-five years, we have good reason to assume to be due to progressive mental strain, together with the inventions of so many unnecessary and unnatural auxiliaries for our luxury and debauch. Thus we pay our debt for progressive civilization.

In regard to frequency of occurrence the United States ranks first, then in order, Ireland, France, Germany, England, &c.

That the ova of the female and the spermatazoa of the male are the physiological fruit of living human beings, and that the proximate principles of which they are composed are derived from the blood of the respective individual, no physiologist will deny. Taking this as a basis it has been argued that insanity is transferred from parent to child during conception. While I do not deny the influence a poor or abnormal state of the blood of the parent during conception may have on the offspring, I certainly will not admit the exaggerated theories of hereditary causes some of which almost lead to a presumption that because the father was an idiot the son must be weak in mind. How many thousands

have a consumptive father, and otherwise unhealthy mother, who go to all the funerals of their medical attendants. How many fathers have the brain of a Humboldt, and how many mothers the master mind of Queen Elizabeth, but their child in an asylum. How many instances have we where the parent's faculty for scientific researches or mechanical genius was prominent before marriage, during and after marriage, probably calculating for the chances of finding the next ultimate chemical principle, while his animal nature looked for legal descendants, and still you cannot make of his son anything but a hod carrier or a dishwasher. How often is it that both father and mother have been insane? Very seldom indeed! Why then is it to be presumed that when one of the parents is of unsound mind this one-half of the vito-chemical combination must be received with that strain upon it by the other half in the formation of the new being? *i. e.*, If in a bottle of sulphuric acid a few drops of nitric acid have been accidentally mixed will the nitric join hands with the sulphuric acid and make a new compound with a salt of lead? Certainly not while there is any sulphuric acid left. Nor will a vine from the Rhine produce good grapes on Blackwell's Island. It is true that statistics show that as many as 30 per cent. of those admitted in hospitals for the insane can conjure up among their forefathers some one who showed a taint of lunacy, but how many per cent. of those dying of Pneumonia or Apoplexy or Gastritis or in Parturition can show among their fathers, mothers, sisters, brothers, aunts, uncles, first and second cousins, a whole squad having similarly been transferred? Let us then look upon *hereditary predisposition* so called not as a direct cause of insanity, but say that in man a diathesis for this or any other disease may exist, which, when brought in contact with or influenced by adequate existing outward influences, will more likely develop such disease in that person than if such a diathesis had not existed. In consanguineous marriages being a cause of imbecility or idiocy I do not believe. Not only the Scriptures but present observations indicate the soundness of this view. A distorted pelvis, unscientific use of the forceps, undue traction on the child when the diameters of the foetal cranium do not correspond with those of the pelvis, in fact anything producing compression of the brain of the foetus during parturition, and particularly when resulting in a distorted or unsymmetrical skull, must be taken to predispose the coming being to Insanity.

On the subject of sex, statistics, observations and opinions are so conflicting that we may safely assume that among a gross of insane persons six dozen are males and seventy-two females. The time when man is most exposed to exciting causes is naturally the one when the mind and body are fully developed and thereby most active, whence it arises that the greatest percentage of patients brought to insane asylums ranges between the ages of twenty-five to forty-five. Before the age of puberty insanity occasionally but rarely occurs. Even so in the aged, and when occurring partakes more of the type of eccentricity and second childhood, or senile dementia, than of real

morbid mental alienation. Some periods of life offer more chance for exciting influences to take a hold, and this holds good in insanity as well as in other diseases, such as dentition, puberty, climacteric period, &c. Persons doing more headwork than handwork are more liable to insanity and less likely to recover. Town and city life predisposes more than country life, probably on account of the former being more exposed to vice. For a similar reason more unmarried people are insane in proportion to their ratio of population. Never married, 49 per cent. ; widowed, 11 per cent. ; total unmarried, 60 per cent. ; married, 40 per cent.

As a warning to parents it may be stated here that harsh and neglectful treatment of a child inducing him or her to seek seclusion, or too much leniency in the permission of reading light literature, particularly exciting and licentious novels, lead to a state of mind easily kindled to exaltation. Further, should either parent have any failing, moral or otherwise, especially non-control of the will, such must be carefully hidden from the view of the child. Want of a proper attention to prevent constant exposure of a parent's mental failings is often a far greater cause of an offspring's insanity than the so-styled hereditary taint.

Not enough caution can be prescribed to keep a person predisposed to insanity from any of the exciting causes ; it is like keeping an electric spark from the predisposing chemical affinity of hydrogen and oxygen.

Intemperance is by far the most frequent of the causes of Insanity. Not only that intemperance is very often the direct and proximate cause, but its influence is also remote. I must urge you gentlemen to use your utmost efforts to stay this bane of society. Your influence as physicians on individuals directly is far greater than other professions, and you can by constant efforts, not actually stay, but certainly to a great extent diminish the occurrence of this passion and vice. It is not only the frequent cause of insanity, but also the barrier to successful treatment of all other diseases. You will meet with it in all nationalities and governments, the civilized as well as the barbarous, in all kinds of society, at court amid the aristocratic and rich, and among the lowly, it is the enemy of mankind, the destroyer of happiness individual and domestic, co-partner of all crime, from misdemeaner to murder, it is the creator of debauchery, the father of poverty, and the chief working element of the devil. Men do not dare to defend it, yet it is tolerated in every social sphere, and I fully believe has caused more anxiety and disease, than all the other causes combined. You cannot arm yourself with a better weapon to combat disease, than by studying the many excellent works on alcoholism. In Insanity, Intemperance is so universally acknowledged as a prominent cause, that nothing remains for us to consider, but the intensity of the effect of the various alcholic stimulants upon the healthy condition of the brain. It has been distinctly noticed that in countries where no wine grows, and where distilled

liquors are but sparingly used, but where beer, ale, and other malt liquors are the basis of luxurious beverages, a much smaller percentage of deleterious influences upon the brain has been noticed, than in other localities. In other words among all evils arising from the use of alcoholic stimulants those from malt liquors are the least. Next come localities where wine is cultivated in sufficient quantities to preclude by their plenty and cheapness the frequent use of distilled liquors, and we may here note that natural wines are by far less hurtful, than the artificial trash unfortunately so frequently used in this country. Of the two kinds of natural wines, it has been found that the *red* is not so inimical to health as the *white*, also that the acid wines are less so than the heavy sweet varieties. In countries where wines do not grow and are too expensive, also in cold climates where malt liquors have by habit been banished with fearful rapidity through the use of distilled liquors, Insanity caused by intemperance not only overshadows those localities, previously mentioned, but the disease has kept step in increase with the increase of intemperance. Distilled liquors and such as are manufactured from spirits obtain their alcoholic constituents generally from grain, or beet root. If these products are scarce, spirits are often distilled from cider, and M. Lunier says positively, that alcohol from cider is more pernicious than that from beet root or grain. Among all artificial stimulants Absinthe is decidedly the worst, not only that when taken in the same dose and strength as other spirits it produces intoxication much quicker, but also that it has a very pernicious influence upon the nervous system. The order in strength of influence upon insanity would therefore be as follows: 1st, Absinthe; 2d, Brandy, Gin, and Whisky; 3rd, fabricated Wines and Cordials; 4th, natural Wines; 5th, Malt Liquors.

A jocular American, but habitual drinker, once stated to me, "I don't see how from your beer I kept sober, from Rhine wine I was tipsy, from Cognac I got drunk and when I took Absinthe I became crazy." Other stimulants such as Opium, Indian-hemp, and other narcotics are also exciting causes of insanity. The use of the former is rapidly on the increase, and its use as a medicine to the insane, as useful as it may be, must be guarded, as patients often complain of sleeplessness, so as to obtain its effect, they having become or have been before habitual opium eaters.

Although the relation which general sexual vice bears to Insanity, cannot be accurately estimated especially in insane prostitutes, there is no telling whether the cause was in the vice or in concomitant intemperance or remorse and unkindness, &c. One kind, Masturbation, shows itself too plainly in Hospitals for the Insane, as not to count as, but too frequent an exciting cause of the disease. We need only visit the wards of Asylums where the demented are kept separately and regard these unfortunate victims, who, although now reduced in regard to ideo reflex action to the vitality of an oyster, still continue by animal like instinctive habit that vicious practice. By the following

points you may easily recognize this state of circumstances: patients are generally more or less imbecile and of shy habits from fear, dread and suspicion. We find a scared look, an irregular circulation, these patients are usually very irritable and are influenced by painful delusions which are irritating and depressing; skin cool, particularly the hands, and covered with perspiration; have false ideas of a peculiar nature which are suggestive of everything insulting and outrageous.

A Masturbator when insane construes everything as vile, indecent and wretched; he is often wantonly mischievous; he sometimes commits acts of violence on some person whom by fancy he supposes may have committed a wrong; the look is very unsteady and continued restlessness shows the nervous excitement under which he or she labors. Some cases have the above symptoms not so distinctly marked, but suspicion should always be excited when newly arrived patients soon search secluded corners in the ward, object to sleeping in a room with others and avoid company generally. Some patients are so unrestrainable in their vice that in Asylums where the Camisole has quasi been abolished, it must be used as an exceptional measure, merely to keep their hands confined. It would probably be well to remark here that on account of the suicidal and homicidal propensities of the masturbating insane, a special care should be exerted in watching over them.

We now come to Epilepsy which constitutes about six per cent. of the cause of Insanity. It often begins during infancy in peculiar kinds of convulsions, which are characterized by the suddenness of loss of consciousness and often preceded by a spontaneous temporary nettle-like rash, which suddenly disappears before the outbreak of the convulsions. When infantile Epilepsy is the cause of Insanity, the latter does usually not show itself until after puberty.

Any injury to the head or spine which produces a pressure or a wound in the convolutions of the brain, abscesses, sanguineous or serous exudations with apoplexy, paralysis, sun-stroke and in fact almost any of the affections of the brain, particularly when caused by injury, form part of the cause of Insanity.

Varities of fever, particularly however, the Typhus, Typhoid and Inter-remittant fevers are often producers of Insanity, especially during the eruptive stage when the rash either not appears at all, or after appearance recedes suddenly. Various other acute and chronic affections sometimes precede Insanity and are often and probably sometimes correctly counted as among its causes. Since Hebra's minute investigations of skin diseases, more attention has been drawn to this subject, and particularly lately a most remarkable connection with, or intimate relation to the nervous system has been noticed. Some have traced many varied functional nervous disturbances to follow a suppression of skin diseases, and as mental disorders have often disappeared upon reappearance of a rash or other eruption, it is worth the while to research this pathological chapter of the skin in its relations to Insanity. As it is often very difficult to discern between

cause and effect in uterine disease, their percentage as a cause cannot well be given. But that suppressed menstruation, fluor albus, displacement of the Uterus and other uterine ailments often favor an outbreak of Insanity there can be no doubt. In a large majority of these cases hysteric convulsions accompany the mental alienation. Beware however of imposition in regard to this cause practised upon physicians by insane masturbators.

We have now finished that part of the exciting causes usually called physical, and approach the so called moral causes. Authors upon Insanity have a habit of expostulating in detailed chapters, on every one of such causes. In my opinion they are all alike in their effect, and as their names are legion a very handsome 1,000 pp. 8 vo. volume could be written upon that subject. Now let us see whether we cannot settle this question in a practical manner, without going into any family grievances, political excitements, religious ecstasies and war troubles about it.

The brain is the locality and domicile of the highest functions of the nervous system, where all intellectual reflex actions center. If we overwork or strain the physical functions of that brain, be it by a sudden shock, by continued excitation, or by overtaxation of its physical ability, it will lose its balance, and through it all control over exito-motor actions. All moral causes act just that way upon the brain, and be their name whatever it may, they influence the brain as stated above, by straining its physical function, and *that is all*.

Try if you can make anything else out of the following most frequently discussed moral causes: domestic trouble, domestic grief, reverses of fortune, religious anxiety and excitement, disappointed affections, fear, fright, intense study, political excitement, war, poverty, sudden joy, wounded feelings, ambition, jealousy, exalted self-love, high responsibilities, shattered hopes and any number of etceteras you may wish to append.

The causes of general Paralysis are usually only physical intemperance, high living and debauch; but on this subject we will discuss details under the proper chapter.

As the brain, like every other organ of the body, must retain its organization intact for a perfect execution of its functions, you will see how necessary it is to protect this supreme centre of life from any accident, and because it, like every other organ, receives its proximate principles for the integral parts from the blood any poisoning of the latter, (alcohol, syphilis, &c.,) will pathologically change it and thereby disturb its functions. Post mortem examinations of the insane have demonstrated physical changes in the brain. These changes are of a varied character and of varied extent, they even are not visible in all cases except with the microscope. This latter circumstance must, however, not mislead us to an idea that no pathological changes have occurred. We know how delicate the structures of the nervous system are and how much we have to fathom to get a correct understanding of the physical structure and chemical proximate

principles of the brain in its physiological action, that we must concede with Dr. Maudsley in thinking that the subtlety of Nature may exceed the subtlety of investigation.

Physiological research has demonstrated that the higher the intellectual functions the farther towards the periphery of nerve centres do we find their workshops. It is, therefore, not to be wondered at that in cases of purely mental, without motor disturbances, pathological lesions must be looked for and are found nearest the membranes covering the periphery of the brain. Of the most indefatigable and shrewdest observers of pathological changes peculiar to Insanity, is the celebrated Schreder Vander Kolk, and he, after more than thirty years experience, says: "I do not remember to have performed during the last twenty-five years the dissection of an insane person who did not afford a satisfactory explanation of the phenomena observed during life. On many occasions I was able accurately to foretell what we should find." In our own state we owe to Dr. John P. Gray a debt of gratitude for his scientific researches into the cause of Insanity, he being the first in America to commence a correct system of pathological investigations.

But not only do we find pathological changes in the brain and its membranes, but also in other organs of the body. Griesinger and Brown Sequard have demonstrated by beautiful and remarkable case, where diseases of the respiratory organs or the alimentary canal, as well as of excretory organs, were the exciting causes of insanity, that the supreme cerebral centres may suffer secondarily from some irritation in some other part of the body. Dr. Maudsley asks, but leaves unanswered, why the nerve centres should be so secondarily affected at one time and not at another? This we can answer by other questions. Why do some children having intestinal worms suffer from convulsions, others do not? Why does dentition produce sometimes derangement in the alimentary canal and sometimes not? Simply because these organs were susceptible to disease and needed only even a distant irritation to be roused to pathological changes. I cannot see why some learned authors always forget that the brain is an organ, and if physically weak will become diseased by any exciting cause, if physiologically strong and healthy may withstand the severest shock.

As easy as it is to declare that the brain shows signs of morbid anatomy after death of the insane, as difficult is it, however, to link the character and locality of the pathological lesion with the stage and character of insanity.

Griesinger, Vander Kolk, Skae, Sankey, Gray Kempster and others have done much to clear the debris of general observation, but much labor must yet be used to establish to a reasonable certainty a certain locality of the brain with a specified and defined morbid change of the very many different ecstasies and depressions occurring in the insane.

Let us review in a general way the lesions of the different parts of the nervous system, reserving their special import when we argue the stages and their varieties.

1st. *The Membranes*, (a) *The Dura Mater* has rarely been noticed to be affected, if so, it occurs in acute cases and is thickened. (b) *The Arachnoid* is often opaque and milky, sometimes on the external surface granular. Hyperemia with effusions into the spaces has also been alluded to by Griesinger. (c) *The Pia Mater* is more frequently the seat of lesion than the other membranes. The *Pia Mater* is frequently found injected and sometimes thickened and adherent to the brain substance, while its two layers are separated and filled with exudations and debris. A thickening of the *Pia Mater* precludes nearly always a similar change in the *Arachnoid*. Fibrous exudations and tuberculous deposits are also noticed. Of course in cases of *Hyperæmia* we find the blood vessels injected.

2d. The *epithelial* layer is sometimes the seat of exudations and of crystalline deposits of phosphates.

3d. The *blood vessels* of the grey matter being in proportion of 5 to 1 of the white cerebral substance, they become an important object for pathological observations; the importance of a proper blood supply to the grey matter is so obvious that the investigations of its vessels is a primary necessity. An ocular inspection of the larger and smaller vessels to determine an engorgement or anæmia should precede a microscopic examination, when, according to Dr. Bucknill, the following anomalous conditions may be found:

(a) *Hypertrophy* of the muscular and (circular) fibrous coat of the arteries, undoubtedly due to overwork of the arteries—*ubi irritatio ibi fluxus*. A thickened condition of the sheath or hyaline membrane, with deposits in the sack it forms at the bifurcation of vessels, a very frequent occurrence, and associated with microscopic aneurisms, and sometimes emboli. Along with this, proliferation of nuclei, abnormalities and deviations in the directions or normal course of arteries have been noticed. Also, a pigmented appearance of the arterioles, and last, but not least, a dilated condition of brain substance surrounding the vessels, probably due to exudation of lymph and waste matter, the latter having a toxic influence upon the cells.

4th. The neuroglia or cementing substance binding true nerve-matter together, (Virchow,) undergoes also the general pathological changes of hardening, atrophy, and degeneration. The hardening generally called sclerosis may be a general brain occurrence or disseminated, resembling grey degeneration often found in brains of the chronic insane, or else *miliary*, a disease of the neuroglia of the white matter, and lastly, a colloid found in both white and grey matter. To these may be added *simple atrophy* of neuroglia as found in extreme cases of *Senile Insanity*.

5th. As in neuroglia we also find degeneration in the cells proper, (a) either as simple atrophy, or (b) pigmentary granular or fuscous degeneration, (c) Calcification, (d) Hypertrophy. Aside from these, *fatty degenerations of nerve matter generally*, may be alluded to and taken *cum grano*, it giving us no insight to any special mental alienation.

In regard to the *weight of the brain substance*, Dr. Sankey has made

some interesting observations. He compared the weight of *cerebral substance* to that of the cerebellum and pons varolii. Normally this is 7.8 to 1, in acute insane cases, 6.49 to 1, in Chronic, 5.77 to 1, in epileptic imbecility (5 cases) and in dementia 6.45 to 1, in general paresis (15 cases) 6.54 to 1.

General prognosis or termination of Insanity.

An old maxim that the earlier the stage when a disease is presented for treatment, the greater the chance for improvement and recovery, holds good also in Insanity. Therefore, melancholia being the first stage, it offers the greatest hopes of recovery. Mania, already less so, and dementia may be set down as usually incurable. One undoubted truth exists, that the sooner the patient is brought to the hospital, the greater the probability of his or her recovery.

The question of percentage of cure, of course, arises, and is somewhat difficult to answer, because the statistics are taken from institutions, some of which receive into their wards old cases from almshouses, prisons, etc., others more than their ratio of delirium tremens, while some take only recent cases. The following, I think to be, an honest statement of probable cures :

When treated from the beginning of the disease	70	per cent
" taken to hospital after 1st and before 4 mos.	60	"
" " " " 3 mos. " 7 "	50	"
" " " " 6 " till one year	20	"
" " " " 1 year	10	"
Chronic cases of mania without dementia	5	"
Dementia	None.	

Some phases of Insanity may modify the above average, viz. : When Insanity begins before puberty, the chance of cure is small. When the temperature of the body rises several degrees, prognosis is unfavorable. Indications of motor paralysis are an evil omen. Complications with epilepsy, almost sure death. Puerperal insanity and such as arises from disorders of the uterus and hysterical insanity give much hope for recovery. General paresis leads generally to the grave. Slowly developed Insanity is of less favorable prognosis than when of rapid order. The causes of intemperance and self-abuse are also unfavorable, and any mechanical injury to the brain, of course, also.

MELANCHOLIA.



LECTURE NUMBER TWO.

To-day I propose to enter upon the first of the regular stages of Insanity, I mean Melancholia.

All cases of Insanity can be traced, while in a state of development, to the emotional reflex centres upon which the subsequent intellectual acts depend and voluntary doings arise. When these emotional centres are by whatsoever cause physically unable to be the recipients of natural or unnatural impressions, the intellectual centres are necessarily out of work. They take a retrograde road of action to find what is wrong, they find no food and go begging.

Gentlemen, when I ask you to place yourself in a possible position, where your intellectual endowments are unable to be active on account of the indifference, or rather want of emotions, would you not feel, nay, almost exclaim, *why is this so?* There is no answer. The intellectual being looks upon a dreary chaos, a debris of the place which was once his arena of activity. You will say, how melancholy this must be. How this must depress one's spirits to want something to ponder over and to find nothing but the nothingness.

Gentlemen, you may smile at this view of the subject. You will not find it in books. The Superintendents of Insane Asylums often do not appreciate it, the learned theorists on Psychology find no switch to this track. The statistician does not think of it, having his mind on relative percentages, and the Pathologist thinks the subject so small as to require a 500 linear magnifying objective to see matter and no reason. Let these men so much gifted, learned and great descend into the wards of an Asylum for the Insane, not for a minute or an hour, but for years, talk with the insane and walk with them, read to them, play ten pins, billiards, checkers with them, enter into their ideas with them. Then, and only then, will they learn what it is to be insane and particularly how insanity begins. If you ask an individual, once insane, but now perfectly well, "how did you feel when you began to be out of your mind?" You will receive no *satisfactory answer*, simply because the patient does not remember it, or only vaguely so, or because he cannot find the words to express that strange feeling. But put the fact in his mouth, ask once an intelligent convalescent patient of an asylum the direct question: "Did you not feel at the beginning as if you wanted some emotion, some excitement, something to turn your mind upon?" and the answer will be, and with a bright smile and understanding look, he will almost joyfully exclaim, yes. Doctor, that was it. I never knew exactly how

it was, but that was it. Do you believe that patient? Gentlemen, this is the Melancholia of the insane, this is the first chapter of the first stage of Insanity, and thankful may the sufferer be if he is saved at this stage. This is the deep, painful feeling of profound depression and misery which all eminent writers call Melancholia.

This state, which I call the primary state of the first stage, is in some individuals so short and combatted by the patient so effectually by force of will during that short period, that it remains unnoticed, unless attention to the fact is drawn, that it is always present; then the observer will note the change. Or, if already further progress of the disease has been made, many points will come back to the memory of such an observer, corroborating the existence of such a depression, and probably other points are even re-occurring, as if the disease were of a remitting character.

Let us now follow up at this, what I believe to be a rational conception of Insanity, in the same rational matter-of-fact manner. How will future symptoms develop? Let us go back to ourselves again. What would we do if our ideational and intellectual faculties in search of a proper subject to work upon, find none? Of course, these faculties would make a subject. This leads us directly to hallucinations and illusions. The patient whose thoughts, by an unwavering rule, must be going on, takes hold of a non-existing impression, created, instead of through afferent nerves by outward circumstances, now by the ideal and intellectual centres transmitted by connecting nerve fibres to the emotional sensorium, and acts, thinks and does things accordingly, *i. e.*, incorrectly. Constant repetitions of such self-created emotions banishes them from the centre of "force of will," and the patient, although knowing at brief intervals that things are wrong, is unable to control them. Here lies the second misery of the Insane, to know that you are acting, thinking and doing wrong, still you cannot help it.

Herewith, a rare case, but very illustrative; not rare, because hallucinations existed, but because they were of all the five senses. Mr. H., aged 50, of great literary talent, prosaic and poetical, with manifest signs of a first-class education, and endowed with magnificent oratorical powers, under treatment at one of the State Insane Hospitals in this country, although not strictly confined, and having the privilege of promenading outside of the Hospital grounds, was afflicted as follows:

He said he heard voices and sounds that did not exist, saw persons and things not present, felt objects touching him when none were near, smelled perfumes or the opposite while a pure spring atmosphere would play around his silvery locks, and tasted cloves in his tea and assafetida in his soup. At one time you would see him following an imaginary fellow poet with threatening exclamations and wild looks, far into the mountains; at other times, answering questions and holding angry conversations with phantom individuals through the windows, or suddenly stopping in the hall, turn around

to some non-passing individual of his own creation, violently saying, "What did you remark, sir?" or, "What did you touch me, for?" Occasionally he would get up from the tea-table, take his cup to the nurse or attendant, and respectfully suggest to him that he made a mistake and poured soap suds instead of coffee into the cup, while at times he might ask of those around him to give him an orange, insisting upon smelling them or any other flavor that might excite his nasal organs, although nothing of the sort was near. When Mr. H. was told in private, and in a courteous manner, that he was mistaken, he would say, "Confound it, I know it now, but could not help it before." He was then rapidly advancing into a state of dementia.

The one and essential character of melancholia is the feeling of oppression of one's self, the egotistical stand-point of "I am" is lost, out of which arises the delusion (if it be such) of being overpowered by some strange influence, loss of emotional power, which, in its turn, gives rise to imaginary powerful agencies, as demons, villains and other phantoms, having control of the patient, or taking a religious turn, that his or her salvation is lost, etc., etc.

Hence from these varied mental pains and sufferings, come these diversified forms and legions of symptoms of melancholia.

But this is only a general answer to the question of varieties of insanity. Why is it, we must scientifically ask, that every insane person has, so to speak, chalked out for him or herself a certain course of wrong acting, thinking and doing? Or, in our own way of reasoning, by what has been said, why do the ideal and intellectual functions of the insane, not finding occupation or right of cause for its activity, select the one or the other of that emotional food to work upon, so that the result, the wrong acting and thinking, is not alike in any two patients? Again, I must ask you to remember that we must philosophize and argue upon the functions of the various higher nerve centres, the brain, as upon the functions of any other organ of the body.

The vegetative and animal functions are governed allke by the same life force.

Suppose three men go fishing, the one during his previous course of life has been liable to thoracic irritations, coughs &c., the other has a weak alimentary canal, and the third a diathesis for rheumatism. The boat upsets and all three get wet.—Next day No. 1 has signs of pneumonia, No. 2 of colic and diarrhoea, No. 3 suffers from pains in various parts of his body. *One cause!—Three effects!!* But all of them are fearfully frightened, and this sudden shock upon their nervous system overbalances their emotional receptivity and, aided by their existing physical ailments they become insane. Now it happened that previous to their going fishing the first, who was a good christian, but often doubtful of the right way or course of his faith and belief, devoted much time to religious researches and dogmas. The second, a successful merchant, having during all his life been bent upon riches and possessions, finds himself a rival of the wealthiest men of the land. The third, an ordinary character, but of contradictory nature, could never

assent in his own mind to an argument nor find things done by others satisfactory to himself, although his standing in society and good breeding forbade his being an open-faced wrangler. Sometime after the fishing excursion we find the three men in the asylum. Man No. 1 sitting in a corner with a sorrowful countenance, vacant stare, an expression of hopelessness, bible in hand, speaking but little, eating less, and when coaxed to say something, only replying, "Oh, it is all of no use; I wish I were dead; I can't get well; I am lost," and the like. He is also haggard and thin, suffering from night sweats and a deep cough, with purulent expectorations.

No. 2—Stick in hand, paces the hall with a majestic gait and commanding air, believes the hospital to be his own, orders the nurses and patients around as if they were his servants, relates to every in-comer the extent of his lands and ships and cannot see why he is detained here instead of being allowed to look after his interests and his domains. In habits he is, however, neglectful, even filthy, and at night relieves himself wherever he lies of his uncontrollable chronic diarrhœa. No. 3—In bed, ill tempered, constantly scolding, disagreeable to extremes, dangerous even when approached, would do mischief to others if muscular atrophy or paralysis did not retain him in bed. His desires are frequent, but for no particular object; incoherent arguments follow one after another without any basis for them, loss of memory, particularly in regard to time, imbecile on subjects of the simplest kind. The first is in the first stage of insanity bordering on the second, the other man a maniac, and the last patient rapidly sinking into Dementia: again *one cause, three effects*.

We have now sufficiently argued the manner of development of Melancholia and of its varied characters. Nevertheless it is well to state a few of the characteristic symptoms which occur more or less at first in all cases of Melancholia. By the patient's perverted feeling of external events he not only feels himself to be unnaturally changed, but also acts as if everybody was gazing upon him for such unnatural action, therefore the patient either refuses to see relatives and friends or looks upon their visits with sorrow and suspicion. He not only sits isolated, but feels so, nothing has any interest for him not even his own affairs. His agony is usually expressed only in occasional sighs provided some one is near, but occasionally also by violent cries of anguish. When alone the patient manifests his sorrow only to himself. It is rare that desperately violent acts of despair are committed except in a moment of convulsive and strange impulse. The longer the patient manifests these symptoms the more do they intensify his misery until he finally succumbs to his affliction. The general feeling of distress leaves him now, and this is the beginning of the formation of a definite concrete *delusive* idea. In other words, the character of of Melancholia now expresses itself, or better, we may express it so, the chaotic feeling of misery becomes systematized and the patient enters upon a new battlefield with a plan of new

and regular tactics. With this the physical symptoms, which in the early stage were indefinite and more or less in accordance with the patient's previous health, assume now a more definite aspect pertaining rather to or being inherent of that part of insanity.

(1) Dreams.—These have existed from the beginning of the disease, but are different in character as the stages of Melancholia themselves. In the beginning the patient is constantly haunted with terrible and intensely agonizing dreams, which actually make him afraid to go to sleep for fear of their repetition, while in the more settled stage these dreams partake more of the systematic order of that stage. (2) Insomnia, not only a natural consequence of the dreams, but also a result of the changed circulation and unnatural nervous exaltability. (3) Digestion is nearly always out of order, mainly due to a deficient action of the liver. That organ does not seem to secrete the necessary quantity of bile, as is shown by the customary costiveness and the clay-colored appearance of the alvine discharges. The appearance of the tongue is unnaturally loaded, thick, red and difficult to scrape the coat off. Sometimes, however, the tongue is just the opposite, flabby, pale and indented. A peculiar feeling of distress, tenderness and fullness is experienced by the patient in the epigastrium. (5) Circulation. The heart is subject to palpitations and throbbings. The pulse accelerated at the beginning of melancholy, but soon normal in frequency, and the swell of the pulse wave slow, the vessels very compressible. (6) Frequent headaches, often accompanied by (7) giddiness. (8) Urine either very pale, or very high colored; in the latter case, accompanied by a deposit of lithates. (9) Skin most always moist, but cold, clammy or greasy. (10) Blood. On account of the patient's refusal of food, of carelessness to provide against hygienic irregularities, disposition to stand erect all day on one spot, often at the window, of impaired digestion, and lastly, on account of the asthenic diseases so often accompanying and complicated with Melancholia, the state of the blood is poor, watery and deficient in red corpuscles. (11) Catamenial discharges often irregular or altogether wanting; also, sometimes *fluor albus*. (12) Phthisis pulmonalis is of frequent occurrence among the melancholic insane. Whether Melancholia predisposes the development of tubercles or whether phthisical persons are more liable to insanity, is as yet an unsettled question.

Although we have observed before that there are many varieties of Melancholia as there are cases, still some of the varieties have more or less similarity and are of more frequent appearance, to justify authors to make special observations in regard to them.

Among females, particularly, it occurs that the subject of their intellectual wrong is religion or religious duties. They search religious works and read constantly the Bible, not to learn, but to find passages to suit their own case. It is curious that they always believe to be, or want to impress upon others that they would be damned; that for them there is no salvation; that they have sinned against

the Holy Ghost. One would think that these constant apprehensions of damnation would induce a fear of death. On the contrary, such insane have decided suicidal propensities.

Nostalgia is a well recognized form of disease and has attracted considerable attention, especially from writers on military hygiene as it occurs so commonly among soldiers. It has been defined as a form of Melancholia which attacks persons when separated from their native land and from their friends, as a melancholy produced by the irresistible and constant desire to return to it. Larrey, Surgeon in Chief to Napoleon Buonaparte during two campaigns, expressed the opinion that the mental faculties in nostalgic patients are the first to undergo a change. Unquestionable aberration of mind was present in the cases recorded. This was induced by the great exaltation of the imagination. The prospect of their native home presented itself to their mind's eye like the "Fata Morgana" to travelers in the desert, depicted in the most extravagant and delusive hues which a morbid fancy could suggest. All this is often in the most violent contrast to the rude, uncivilized and poverty stricken home which their better reason might suggest as sober reality. Another says, regarding the nostalgic patient, imagination pictures to him the events which are there at home transpiring. At night he dreams of them, awaking in the morning to pass another weary day in pining for the companionship of those he loves and for the scenes amid which he was born. The continuation of such emotions eventually produces a diseased condition of the mind, and by sympathy disorders of the functional operations of the organism. Pinel regards Nostalgia as a form of Melancholia, and Bucknell and Tuke say it may sometimes be a variety of simple Melancholia. Feuchtersleben asserts that Nostalgia exists without alienation of the personality. It can only pass into insanity when in its higher degree and after a long duration, and then it represents a "melancholy with a fixed idea of domestic happiness."

The physical symptoms of the disease are those common to Melancholia. There is often increased heat of the head, redness of the conjunctiva, great palor and melancholic appearance of the countenance, acceleration and feebleness of pulse, also often palpitation of the heart, produced by the slightest emotion. There is usually loss of sleep and appetite, and the secretions are diminished, the urine scanty, the bowels constipated and the exhalations from the skin and the breath offensive. The patient moans, sighs, cries and wrings the hands. Food is often obstinately refused and there is rapid wasting of muscular tissue and emaciation. The susceptibility of the nervous system to ordinary impressions is greatly diminished. There may be marked depressing delusions, or, without these, "all things, present and future, are to his view involved in dreary and hopeless gloom."

Frequently suicidal tendencies are developed, and the patient may at length put an end at once to his misery and his life. We will not attempt a fuller description of this state, for as quaint old Burton re-

marks : " I need not be so barbarous, inhuman, curious or cruel for this purpose as to torture any poor, melancholy man ; their symptoms are so plain, obvious and familiar ; there needs no such accurate observation or far-fetched object ; they delineate themselves ; they voluntarily betray themselves ; they are too frequent in all places ; I meet them still as I go ; they cannot conceal it ; their grievances are too well known. I need not seek far to describe them."

The military surgeons who have written upon the subject, and detailed their own experience have said, that those who inhabit cold, moist and mountainous countries are most liable to the moral impressions which are the origin of Nostalgia. The cases of the Swiss and Scotch Highlanders, who when separated from home and friends, are so easily effected by hearing the national airs, that it has been found necessary to prohibit their use by the bands of the army in which they served, have often been quoted. The Laplanders and the Greenlanders are said to mourn for their cold and barren homes and to run the risk of even losing life itself to regain their rigorous climate. In the French army, on the contrary, those from the level country, who served in the mountainous regions suffered much from Nostalgia. The Dutch have also been quoted as being readily afflicted with the same disease. In our late war the surgeons of the army reported numerous cases of the same character occurring among all nationalities. In the medical and surgical history of the war of the Rebellion from May 1861 to July 1866, there were among the white troops 5,213 cases of Nostalgia and 58 deaths, or one case to every 1,117 under treatment in the hospitals. It has been frequently said that the negro race was little subject to this form of disease. The statistics among the colored troops from July 1861 to July 1866 give 334 cases of Nostalgia and 16 deaths, or one case to every 1,884 under treatment in the hospitals. This gives a comparative ratio of 1.60 cases of Nostalgia among the white troops to 1.00 among the colored. This ratio might be further reduced if we could make allowance for the number of the colored troops who had a large proportion of white blood in their veins. Among the patients in the hospitals, climate does not seem to have such an overbalancing influence as has been attributed to it by many writers. There are other influences which seem more potent. Larrey and others have noticed that a defeat of the army largely increased the cases of Nostalgia, and the severity of the disease, while successes and victories had the opposite effect. The depressing influences of captivity cannot be better illustrated than in the case of the Children of Israel, as depicted by the Psalmist in the 137th Psalm—"By the rivers of Babylon, &c."

Another marked feature of the disease is found in the fact, that inhabitants of cities do not suffer from Nostalgia equally with those from the rural districts. This is easily understood. They have mingled with a great variety of individuals and having seen more of the world outside of their comparatively narrow sphere, they have broader and more expansive views of life. They have made themselves more fa-

miliar with other countries by their intercourse with those who have visited them. Accustomed to see strangers, and strange sights, when viewed in a foreign land, they do not produce the mental weariness and the contrast with familiar scenes as when first looked at by the person who has seen but the valleys and hills of his native town. As a writer has expressed it, the inhabitants of great cities and the young soldier taken from the capital rarely experience Nostalgia.

Other things being equal, however, the young are more liable to suffer from the disease than those of mature life. This is largely due to the spirit of dependence which is fostered by the kindly influences of home and friends from whom they are not accustomed to be separated. Women are said to be less subject to the disease than men. This however has but the semblance of truth, as they change their positions less generally than men, and accustom themselves to less varied and less different modes of life than men.

Misfortunes, privations and the want of occupation are frequent and efficient factors in the production of Nostalgia.

We have thus spoken at some length of this disease, as it is so prominent an element in the production of Melancholia which is the most common form of mental disorder among the patients in the Emigrant Asylum.

The general fact ascertained by experience of others are found to apply with nearly equal force to the emigrant population. As before intimated however, climate and country are not found to exercise the greatest influence. All nationalities, all countries and climates have here their representatives in a ratio mostly in proportion to the number of emigrants from each. They came from the warm and the cold, the moist and the dry climate, from the level and fertile plain and from the mountains and from the barren soil. The rural districts where the population is spare and the small hamlets furnish the greater proportionate number of patients than the larger villages and cities.

The age of the patient corresponds closely with the average of the emigrant population, which is rather below than above the prime of life.

In regard to the sexes there is a better opportunity of judging of the effects of influences which conduce to Nostalgia and through it to Melancholia than has ever before been presented, as all conclusions have been drawn from a small number and from insufficient data.

Many patients afflicted with Melancholia not only have a decided aversion to food, but actually refuse to partake of any, giving various reasons for it, such as that they are not deserving of it, or that the food is believed to be poisoned, so that the Doctor is sometimes forced to eat from the same plate and morsel of the patient, or that they find some other excuse, such as that they cannot eat, &c. I believe all these cases to be due to a false mental interpretation of a physical derangement of some of the digestive organs. A large majority of these refusers of food are however very glad to get something to eat pec-

vided they could get it and eat it without being seen. In all such cases that opportunity must be given to them. You must cause a meal to be placed in some room of another patient, but in view of the non-eater where the latter is able to steal and clandestinely devour it without being noticed by any one. The best time for such a trap is when the patient is out of the ward, either carriage riding, walking, working, at an entertainment, in the chapel or elsewhere. This should be done regularly at stated hours. If kind words and deception fail we must resort to forcible means, the disagreeable nature of which, after several repetitions, frequently induce the patients to partake of food voluntarily, although they insist upon only doing it *because they must*. The means of forcible introduction of food usually resorted to, are the œsophageal tube with a funnel at one end, or the stomach pump. I think there is no need of these. I have never failed to be able to give patients *as much as I wanted them to take* of liquid and semi-liquid food, such as beef tea, milk punch, very soft eggs, thin gruel, &c., in the following manner: Place the patient in a horizontal position, if practicable, on the floor, otherwise in bed, kneel at his head, place the latter and hold it forcibly and steadily face squarely upward, between your knees, insert the fore and middle finger of each hand between the teeth and cheeks, stretch them outward and upward to form a hollow, press both thumbs against the nostrils to prevent breathing there; get a second person to hold down the patient's hands and arms, while a third, with a pitcher having a small nozzle, pours into the mouth the liquid, which will pass between the interstices of the teeth and particularly behind the last molars into the fauces, where, when arriving at the third portion, involuntary deglutition taking place, the patient will soon be obliged to take one swallow. If you keep the cavity of the mouth filled he can take no breath without keeping on swallowing, and you can administer in that manner a whole pint at a time before giving the patient a chance to breathe. This method is simple, does away with the horrid exposure of tubes, pumps, basins, &c., and has the advantage of being equally as disagreeable to the patient as any other without risk of injuring a probably inflamed or otherwise diseased stomach and without giving pain.

Sometimes the morbid fears or apprehensions of melancholic patients are in the direction of their own state of health, and although these apprehensions are expressed in exaggerated forms and ridiculous suppositions as well as erroneous conclusions, still are they to some extent at least based upon a disturbed organ of the body. By listening, therefore, with due allowance to the patient's abnormal statements some good inferences in regard to the patient's bodily ailments may sometimes be drawn. For instance: I know of a case where an elderly lady pertinaciously insisted on having accidentally put a thimble up the mouth of her uterus which she could not get out again, which brought to light that she had a cancerous tumor there of which she subsequently died, although discharged from the asylum mentally well.

Hypochondriasis is not in itself insanity, but is merely often found combined with and actually the principal symptom of it. If a hypochondriac is *not* insane he has mental depressions, which, although coherent in ideas of cause and locality, are often so strong as to place him or her in close alliance to a case of Hypochondriacal Melancholia. The only distinctive diagnostic point would be the manner and quaintness with which the patient insists upon his ailments. Among the insane or the melancholic the very frequent various complaints of ailments of so many different parts of the organism, or the ridiculous declarations of impossible facts, immediately stamp the case as belonging to insanity.

For better comprehension and diagnosis let us adopt Dr. Tuke's modification of Dubois' arrangement of this subject in regard to symptoms:

1. Concentration of all the patient's attention upon his own maladies. Mental disturbances excited by most trifling sensations.

2. Anxiety of mind, increased and constant fear of death harasses the patient. If the digestive organs are more particularly the seat of complaint, he suffers from Gastralgia, Constipation, Dyspepsia, &c.; if the organs of circulation, palpitations, dyspnoea, throbbing of the arteries; if the sensations are general,—inertia, languor, sweats and flying pains; often also the patient has special delusions and illusions respecting his physical condition.

3. Aggravation of all the symptoms, chronic inflammations of all the viscera and structural changes, especially of the digestive system. Next in frequency are affections of the thoracic organs. Symptoms sufficiently decided to make it certain that there are serious organic lesions.

Trials have been made to lead the patient's mind off from the fantastical, erroneous fixed ideas and thereby affect a cure, but I doubt if this mode has ever been successful. I know of a case where an old lady firmly believed she had snakes in her stomach. To lead her to believe that they could be easily removed, two small snakes were caught alive, placed in a common earthen spittoon, emetic was given and the lady made to vomit copiously into the spittoon. The lid being taken off the two snakes were shown to her. The ruse helped for about two weeks when she said it was a pity the snakes were not taken away sooner, for she felt that they must have left their eggs and that her stomach was full of young snakes. A year afterwards she died with a good sized tumor in her stomach. Almost all the remarks made on Hypochondriacal Melancholia hold good for Hysterical, only that other organs of the body are pathologically affected, beside occasionally those mentioned, but here too, it is difficult to decide between Hysteria with and Hysteria without Insanity. Here too we find perverted emotional excitement, only slightly varying from Hypochondriasis, the patient asserts she cannot control her thoughts and expressions, movements, &c.; insists sometimes that she cannot move this or that member of the body, cannot walk, open her hands, &c. These things

are generally due to an influence from the higher or mental nerve centres, for we often can make patients do the very thing she asserts she cannot, by arousing the contrariness of spirit which is so often combined with this disease. For instance, a woman lying on the floor and insisting that she is unable to get up, can be made to rise by tantalizing her that her blind which she always wants down is now up. Let her a moment alone and she will get up and let the blind down. Such freaks often occur. I will not enter into a description of Hysteria now, as I intend to devote a special hour to its causes, symptoms, diagnosis, &c., but only ask your attention, that the continual exaltation of sensibility leads them to uncontrollable irritability, ugliness of temper, pertinacity of doing things out of order, that the sensational soon gets the best of the intellectual centre and the first step of Insanity, Melancholia in its various forms is the result, often progressing to Mania and Dementia. The prognosis is generally favorable.

So far I have endeavored to give you hints on a few forms of Melancholia where prominent marks and frequent occurrences justify, not a classification, but a special mention. Now I will draw your attention to two directly opposite manifestations of Melancholia, the one where the reflex influence of emotions on the motor functions is that of activity, the other where a torpidity of the muscular system is prevalent. The patients of the former are really pitiable. Their morbid thoughts mostly on religious subjects or due to domestic grief, are, or at least seem to be of such a torturing character as to give no rest. The common expression of life so often used, "The thought will drive me mad" seems to have become in such cases a stern reality. They either walk up and down the hall with fleet steps as if they had hurriedly to execute some important order upon which life and death depended; or they run down the room, but arriving at the door remember that they cannot go out, and run back again only to commence the errand again. These tramps continue a long time, even at night in their rooms, causing sleeplessness and great exhaustion. Others again keep their hands active, pick up things continually and lay them down again, change pictures on the wall from one place to another as they appear to bring about unpleasant recollections, or are always opening all the windows of the room and then shutting them again. Cases again occur where patients confine their emotions to a small space, generally a corner of a room or a small chamber; they walk up and down, to and fro, like a wild beast of a menagerie in its cage, wringing the hands with constant wailing, exclamations and expressions of anguish and despair. Day and night they are in this state of excitement about themselves, muttering and crying, but still walking constantly, repeating the same sentences; occasionally we find cases of great depression accompanied with actual chorea of the worst form. Such continually active patients in course of time become exhausted, so much so, that life is endangered during the period of nature's forced rest. But this period is also the most favorable for convalescence, and is therefore looked upon in anticipation by the physi-

cian with more than ordinary interest and anxiety. Again, another class of melancholics demonstrate their restlessness by wandering from one house to another, from one friend or relative to another and even from one town to another. They have no rest at home, and having mostly an idea of poverty, or that they cannot support their family, they wander about either relating their afflictions to others, or else to make some speculation to get out of supposed financial trouble. One case of striking illustration:—A middle aged man, confined in an asylum for being constantly in trouble about supporting his family, although well to do in life, and for beginning to indulge in wild speculations to retrieve supposed losses, made his escape from the asylum, borrowed a considerable amount of money from a friend who knew nothing about his confinement as a lunatic, went to Washington City, bought up a number of old schooners which were sold at auction by the Government after the war—resold the vessels at a profit of over five hundred dollars, returned to the asylum, but still complaining that he had no money to give bread to his children, for with the five hundred dollars he said he must pay a debt. The loan he contracted from his friend he paid back faithfully on his way home.

Melancholy with muscular torpidity, are cases which at first sight completely resemble Dementia, and often can only be distinguished by their recovery, which frequently occurs. Such a patient cuts a figure or caricature of complete laziness, for such is the appearance of that class, that not only the lethargy of all muscles of usual activity is complete, but even those of facial expression, giving an extreme look of stupidity; and as he is difficult to arouse from this state, nothing seems to attract his attention so as to alter his position, which standing or sitting, is motionless. He sits like a drunken man in a stupor, allowing every part of his body to hang and dangle, no matter how inconvenient the position may be. Wherever or however he is left or put, so he remains, takes no care whatever of himself, passes his dejections as he is, makes no effort to eat, drink or do anything for his comfort. This hanging of all muscles has the effect of a slow circulation and of puffing up the hanging parts, disfiguring the face and giving it a purplish color, swollen feet and hands, almost, cedematous harsh dry skin, all of which anything but improves the patient's general appearance. Even when walking he or she will go straight ahead, and when coming to an obstruction stand still till the obstruction is removed, or he by others turned to change direction—in fact appearing like an automaton. There is seemingly a complete bodily and mental annihilation.

Now it is curious, that when such patients get well, they do so rather suddenly, they remember distinctly all that has passed and regain quickly their normal mental force and intelligence, as if they had never lost it. Some cases are much milder in form and symptoms, manifesting principally a sluggishness and want of pliancy. In still milder cases there is only a tardiness and reluctance to move, speak, or answer questions. Cases of long-lasting complete taciturnity are also occasionally occurring.

It is difficult to make out a boundary line between Melancholia and Mania, as this transition state is mostly a sort of mixture, although frequent cases occur where a melancholic patient suddenly becomes violent. It is most generally noticed by the patient asserting his illusions with more force, he looks with anger at the non-believer and gradually acts with violence, as if he would want to insinuate that *there is enough of this now*.

From what you have now heard a diagnosis is not difficult, nearly all cases being self-evident. One warning only ; where a suicidal or homicidal tendency exists, or where the patient is very anxious to be set free, they sometimes, and particularly during the first or second week of their detention, pretend to be, and act by main force of will, as if they were well, in order to obtain their object. The more a patient assures you suddenly that there is nothing more the matter with him, the more certain it is that there is no improvement. A patient, really getting better, appreciates his situation thankfully and is willing to remain till discharged, while a fraud is unthankful and believes inwardly that he is detained for insufficient cause.

Melancholia is the most favorable of all states and stages of Insanity. A large majority get well. The mortality is between 6 and 7 per cent. of those admitted into an asylum.

MANIA.



LECTURE NUMBER THREE.

The starving intellectual centres for want of emotions caused by outward influences being properly received and which is the basis of all trouble of the melancholic become ravenously hungry and thereby savagely mad. "Enough of this prison," I will take what is denied me: here, there, everywhere, no matter what, one thing, many things, all things, in order or out of order, singly or together, separately or mixed, or in isolated fragments. So says intelligence, so it acts accordingly, thinks accordingly and does things accordingly. Man is now a maniac, his "I am" is set free, but like a long imprisoned animal is wild, his previous depression changes into excitement, his self-feeling into exaltation. There is no more controlling this exaltation of self-feeling: like a runaway horse it dashes here and there with fury, until it breaks down shattered and a wreck, never to revive again if not a Godsent accident stops its career and makes it return home—sound and sane. Such is Mania. Is it possible, under the circumstances, to describe a typical case or to give all the symptoms of this form of Insanity? Hardly so. We may say the patient sings, talks, dances, jumps, runs about, destroys, tears clothing, acts the clown of the pantomime and does all and everything extravagantly foolish and with foolish extravagance, and still it is merely an approximate description of a maniac.

What has been said in the last lecture on the cause of the great variety of insane manifestations, is applicable to Mania as well as Melancholia. The character of the old predisposition to physical anomalies as existing in the subject before the outbreak of mental alienation now shows itself and the old proverb, "children and fools speak the truth," is verified. The old diathesis to a specified crookedness of mind was, during health, under control of the will, now it is out of it.

We have two groups of Mania, the one where the derangement is characterized by the movements, conduct and thoughts being of a general incoherent nature without regard to objects, place or circumstances and termed usually "*Acute Mania*:" the other where the derangement partakes more of a system and the actions and thoughts are in response of *one* or only a *few*, but definite delusions. This is called Monomania and is usually *chronic*.

The state of Melancholia which invariably precedes, more or less apparently, all cases of Mania appears to be in a kind of lull, the pa-

tient seems anxious or even fearful as of an approaching storm. Suddenly the emotional, or what Maudsley calls the affective life, ceases to be under control. What, during the stage of Melancholia, induced the suppression of predisposing inordinate acts of previously healthy and rational man is now fairly deserted and a quite opposite mental and moral manifestation takes place. The morbid impulses lead him to the contrary of what he has been, and a state of delirium brings him to all inordinate actions previously controlled. A miserly man becomes extravagant, affection changes to indifference, mildness of temper to violence and rationalism to bigotry. Patient is extremely lively, a busy body, restless and does everything beyond measure. Hence all moral or immoral acts are carried to extremes and symptoms such as excessive sexual indulgence, swearing, extravagance or the reverse, great piety, belief of apostolic callings, &c., are not uncommon. Strong impulses, destructiveness, suicidal and homicidal propensities and others are now not only being thought of, but executed, and provocations meet with opposition, violence and blows; instinctive feelings of propriety are often lost, pleasure is found in the filthiest acts, such as besmearing themselves with their own faeces, eating dirt, acting with great indecency and lewdness, and the most refined minds become the most disgusting; the intellectual faculties are unsteady and wandering, the answers and speech incoherent and never remaining upon the subject, but rambling from one to another, and all kinds of ideas follow in rapid succession.

The facial expression differs according to the character of ideas and the extravagance of conjectures, often the expression changes rapidly from anger to benevolence and from resentment to gratitude. The whole external man shows what is going on within him and as innumerable the delusions and thereby the acts and thoughts, as innumerable are also the facial expressions. As pretty constant symptoms we however find; flushed features, congested eyes, disordered colored hair. To give you a slight idea of the inability of the patient to fix his mind upon or to adhere to one idea, may form part of the following letter of a patient, as given to Dr. Sankey:

My Dear Sir and Mrs.—

“We have asked him and (to-day written for the Prince of Wales grant of 1862) which we never then refused, but as a bird in the hand is worth two in the bush, we on the 5th of November day capably carried a law case, and the judge’s judgment was the money to be paid forthwith. Daily bread and common sense depended upon the recovery of £10 suit on hand—Ladies could not encounter a London crowd thro’ whether the greater sum 40 £ or £ per annum was said to be available having received no written order how could you go through a thicket without a ticket as upon all such occasions the police Pass. We knew before we came here the grant was said to be placed at the disposal of an English and Continental lawyer in a representative Law case, of which Prince John of Saxony under reported slander of my character wished to be unconsciously the respectable

head of course we refused his kindly desire to aid, and judicially with it, which was groundless and childish. Retrospectively and prospectively looking at our present history we say let Friendship take place of representations and necessitations as money is our friend in the King's coin."

I may here incidentally remark that letters from the insane are often of value to the Superintendent of an asylum as a means of convincing relations of a patient of the state of his sanity. *These generally tell the truth.*

Other physical symptoms of Mania are :

Pulse accelerated, about 15 beats per minute more than in health, often more yet, and very variable. When the state of excitement has continued for a while the pulse falls to almost a normal rapidity. The temperature of the body is slightly increased and when connected with a typhoid state is increased as much as 3 to 5 degrees.

Sleeplessness is almost always common, the patient being noisy during the night.

Digestive system, more or less impaired, particularly when the patient eats all sorts of filth, &c., the tongue is usually red, with prominent papilla, but sometimes coated and foul. Constipation is common, or if not, there is persistent diarrhœa.

Skin,—either dry and harsh, or else what is more common, moist and of offensive odor.

Breath is also offensive and sour.

Urine.—During excitement the flow of urine is diminished and deep in color, with sediments.

Sexual excitement is not present and the functions of menstrual discharges are often suppressed.

Appetite is rather excessive, a very few refuse food, but not for a long time.

Nutrition.—On account of the constant muscular efforts as well as mental activity without adequate digestive powers, the patient grows gradually thinner and in some cases marked emaciation takes place. Although this gradual loss of flesh need not occasion any alarm, we must watch for a sudden exhaustion and collapse of a maniac, particularly in the early stages. It may here be remarked, that when that exhaustion leads to a fatal termination, all mental symptoms generally disappear and the patient dies conscious of what is going on around him.

Pupil.—a change in the size of the pupil has been advanced by some authors, but it is so uncertain that no value can be placed thereon.

The *course* of the disease is very variable. We meet with many cases where an attack of Mania remits for a time, to resume again with its original force. Cases of complete intermissions are also not rare. Often patients make regular yearly calls to the Asylum, and usually are perfectly cured again after a short stay, but generally the 4th to 6th relapse proves either fatal or lapses into a chronic state. Sometimes attacks of Mania alternate with Melancholia. Any one attack

of Mania can last from a few hours to several months. Recoveries take place usually during the year, seldom after that time and hardly ever after two years, when the disease passes over into chronic Mania or dementia, that is to say: when the acute stage becomes chronic and, aside from extant delusions, considerable intelligence remains, the case becomes one of Chronic Mania, but when with the delusions remaining, there is also a loss of mental power to a considerable extent, then Dementia follows. One particular kind of Mania may here be yet alluded to—where the disease enters almost without visible Melancholia, takes a very rapid course, with fever, delirium and great prostration ending in 2—6 weeks in death. Upon opening the skull acute inflammation of the membranes with effusions are found.

Prognosis. Not quite as large a percentage afflicted with Mania get well, as with Melancholia. Nevertheless many are the recoveries of acute Mania. When of long duration, or when passing over to Chronic Mania the chances are very much diminished. The mortality during the stage of acute Mania is however less than during Melancholia, being only about 4 per cent. to the others 6 or 7 per cent.

Puerperal Mania offers sufficient peculiarities by its cause and on account of its symptoms, as to merit a distinct consideration. It is a state of Insanity arising from and following parturition, and occurs during the period of *excitement* of the lacteal system. It is also peculiar on account of its occurring during a state of woman, when any complication of the normal progress of that state is most acutely felt and difficult to deal with.

It is rarer in Lying in Hospitals than in private practice, probably because the poor and destitute have during and after parturition less care at their homes than at a hospital.

The danger of puerperal insanity to appear decreases with the time after parturition, so that more than two-thirds occur within a fortnight and a large portion of them during the first five days. Again, more cases are noticed after the first pregnancy than subsequently.

We find very few instances where Melancholia is the type of Puerperal Insanity, and if we do, it can generally be traced to previous attacks of that kind without a puerperal state, so that we have to speak here only of "Mania" after pregnancy. Dementia can of course not be termed puerperal, being a sequela of Mania too far distant from the original cause. Puerperal Mania then offers us at first sight the following very characteristic group of symptoms—(1) Fever, (2) Intense mental excitement, (3) Excessive incoherence in what is said, and (4) A disposition to use obscene words during all the incoherent talk. Dr. Macdonald pronounces the last as very characteristic on account of its constant occurrence and the gross manner in which the words are displayed, quite differently than it happens by women in other types of Mania. The malady approaches in the following manner: the patient feels restless and uncomfortable, and cannot catch the little cat-naps so desirable in the lying-in state; she complains of headache and the nurse reports a diminution or complete cessation of

the Lochia; the appearance of the woman is changed, and an anxious look in the countenance is noticed; the pulse is quickened, and what is called, nervous or irritable; appetite is lost, and upon examining the tongue, we find it coated and white; epigastrium heavy; urine scanty, and when tested albuminous; the secretion of milk diminishes or entirely ceases. In some cases an inflammatory condition supervenes, and these generally terminate fatally.

The general mental excitement mentioned above, details itself into complete aversion to everything previously dear to her; husband and child are disregarded and neglected, and cases are on record where attempts to kill the child have been made; no matter how correct previous habit and decorum may have been, they are displaced by indecent language, oaths of fearful nature, and exclamations or mutterings which astonish all who knew her before; she talks incessantly and angrily, gesticulating wildly, while the eye is unsteady and wandering; hyperæsthesia and acuteness of senses, particularly hearing, accompany this wild state of things. Even suicidal desires have been observed. Occasionally the symptoms partake of the hysterical, patient crying and laughing alternately, accompanied with convulsions.

Aside from mechanical injury or confusion to parts during parturition in tedious and instrumental labor, and which is sometimes the real cause of the calamity, it has been noticed that women susceptible to mental derangement find the parturient state a fruitful exciting cause. Other causes are strong mental excitement; for instance, the remorse of having an illegitimate child, particularly when unmarried; mental distress or shock of any kind, anxiety during prolonged labor, &c. If not combined with inflammations of internal parts or marked phrenitis the progress is very favorable. About 80 per cent. recover and about 5 per cent. die. Some pass into a state of chronic insanity and dementia. The first sign of recovery is the return of the lochia or milk, and if later of the menstrual flow.

Monomania, or as it is sometimes called Delusional Insanity, or also Chronic Mania, (a misnomer,) occurs generally as a sequence of Mania. Here the patient deals with some erroneous conviction on a definite subject, which has taken such a hold upon his reasoning faculties that every other consideration is either laid aside or drawn *into* the category of his subject and judged accordingly and, of course, erroneously; otherwise he *seems* not mentally deranged. Maudsley very correctly calls it a systematization of the morbid action in the supreme cerebral centres.

We must be guarded not to fall into the error of believing that the individual is of sound mind outside of his monomania. This is not so. It merely seems so. How can the intellectual faculty be normal when it does not recognize the impression made upon the affective or emotional centres? When it does not *appreciate* the error and therefore acts and thinks and does wrong? The reasoning and intellectual faculties cannot be *affected in one direction only*, it is the *generally* affected state which allows a particular erroneous action.

Because the mental state of monomania is constantly under the influence of surrounding circumstances, either to act as a cause for an outbreak or to give that outburst of Mania a particular direction, color and shade, it is best to keep the patient from such influence. It therefore arises that a monomaniac is not only much better off for his own feelings, but also for his own good in a Lunatic Asylum, for there he has not ground enough to expand upon nor cause enough to bear matters upon his misdirected conceptions. A patient brought to a hospital in that state, is soon found to get apparently better, and friends and relatives visiting him often believe him cured and ask, in spite of the physician's objections, for his release, when, scarcely among worldly influence, the morbid respectivity of the latter shows its true colors and the patient waxes worse, even worse than before. Occasionally the direction of ideas partake, under the new influence, of a new or, at least, somewhat different character, and often the relapse is very violent.

We have observed that Monomania is a sort of delusional insanity of the emotional centres and affective life. Now, it happens that the false impression is so engrossed upon that emotional nervous system that an outward cause is not always necessary to give it impulse: in other words, it becomes entirely *animal like or instinctive*, and is, I think, very properly called by Esquirol *Instinctive Monomania*; whereas, otherwise, some cause, however small, is necessary as an incentive to an outbreak, when we may call it *Affective Monomania*. In both of them the general character is about the same, the difference lying only in the existing causation, and in the continuity of susceptibility to bring about this morbid action.

Another peculiarity must be alluded to to allow of a perfect understanding of a completely developed case of Monomania. We come frequently across individuals whom we know have from their very birth a defect of the organic functions of the brain, varying in degree from slight imbecility to complete idiocy. Such individuals demonstrate their abnormal action by non-recognition of morality according to their degree of alienation, and during their childhood lean, by fancy probably, (for their immoral manifestation seems to give them intense satisfaction) towards offense of one or several of those moral laws which are impressed upon the crowning point of God's creation—man. Lying, fighting, stealing, contrariness, complete incorrigible villainy, irresistible pleasure to torture, even killing without a spark of human kindness, respect or feeling, are the principal characteristic propensities of such cases.

Now, as by the definition given to Insanity at the beginning of these lectures—a *change* of a person's mode of acting, thinking and doing things—this very definition becomes a test of Insanity, the state of things described in the previous paragraph cannot, under the circumstances, be such a test, and although its classification among the various phases of Monomania is probably the clearest and best, it ought to be looked upon as a "Congenital Mental Deformity."

Delusions, (perversion of existing things) and Illusions or Hallucinations (imagination of non-existing things), either one or the other, are the prototype of Monomaniacal symptoms. The degree of a patient's previous state of mental education, conjoined with circumstances occurring in every day life, be they social, religious or political, give the first coloring to these Delusions and Hallucinations, out of which spring the perverted actions of the individual: sometimes in language and expression of ideas, or in deeds resulting from regularly constructed, but of course out of place, plans, or sometimes in continuous brooding over mechanical or scientific novelties and inventions which engross the patient's mind. This diseased psycho-cerebral condition does usually not appear at once, but comes on gradually and is noticed by a show of reserve at first, in which the patient seems absorbed in some particular thought, and if disturbed in it, is considerably annoyed, which annoyance will often produce an outburst of the very acts and doings which express the character of his delusion. This mono-activity of the brain will very naturally at first seek to exclude everybody else from its sphere, and suspicions arise toward the nearest kins or those around the patient, and all acts from and by them are looked upon as having as an object his physical or mental destruction, or to embarrass him in the execution of some premeditated scheme. The least irritation will now sever him from any rational connection with the world around, the first outburst occurs, and the projected deed is committed. Outrageous as that may be, a reaction generally occurs in the first attacks, and the person seems for a while to ponder over the feasibility of his acts, even sometimes showing a kind of remorse, but the seed has been sown, and every attack brings him further from control of himself, until the delusion becomes constant and steady and the acts correspondingly frequent in their occurrence. Such is the initiation and progress of the majority of cases of monomania.

We meet, however, occasionally with cases which do not take such a wild and random stretch of the unnatural, and it is well to have an insight to that anomaly of perversion. It occurs prominently in individuals who in health are what is called possessed of indomitable self control, firmness of will and coolness under all circumstances. They feel the storm coming and fight against it like the epileptic sometimes feels his "aura" and runs for help. Such persons by any overstrain of their mental faculties or shock to their supreme nerve centre, in short, when powers of endurance are put upon the stretch, suddenly find themselves no more competent for their usual mental functions, complain of dull headaches, cone said as if the brain was compressed from all sides, sleeplessness, loss of appetite, often expressing themselves as, I feel changed, I am not like myself, and the like. And so they are. Were it not for some control which they were in the habit of exercising over themselves, they would now give up to strange impulses arising unconsciously. Tendencies to do this and that which their self-possession overcomes for a while haunt them. Poison is bought

for suicide, and afterwards thrown away with disgust; sorties from home are made for some purpose or other, but the errand given up when halfway; letters are written, sometimes of one tenor, then of another, and, when sealed and addressed, thrown into the fire; in short, deeds done which the better self abhors and therefore undoes. I will quote here what a patient said to Dr. Tuke, and taken from his work. "I have my reason, but I have not the command of my feeling; circumstances in life create feelings and prejudices which prevent my passing through life smoothly. My *intellect* is not insane; it is my feelings I cannot control." Never was there a better description given. Such patients actually know and feel their disease, but although they can partially avoid overt insane acts for a time, they cannot avoid the wrong impulses. This fact induces many to seek advice from a physician, or to place themselves voluntarily under the care of some institution, and often are quickly cured. Unfortunately, however, some are doomed to Insanity for life, often a short one, for many commit suicide.

The prognosis of Monomania is very unfavorable. Its character being in itself one of Chronic Insanity, makes it so. Most all Monomaniacs, if not relieved by death, pass into a state of Dementia.

As we advance in the chronological order of the Stages of Insanity, we find the brain to become more and more pathologically affected, particularly in regard to that opaque milky exudation depositing between the membranes or their substrata, as well as their adhesions. It is however curious to note that in view of the above statement, so few changes in the brain are noticed in Monomania, although it is generally conceded to be of chronic character. The only reason we assign to this seeming contradiction is, that, although we admit a functional disorder to be present, even if the alienation is confined to a change in only one direction, we must also admit that activity of the brain is correspondingly limited and confined, because on other subjects, but the abnormal, the patient shows no undue excitement. Even when the brain is congested and its vessels overloaded at the beginning of Monomania, they seem to assume the natural state to a great degree after the first excitements, and when the acts and thoughts of the patient have run into their proper one-sided channel. But that a lesion of the brain can produce a change of intellectual functions is of no doubt, as hundreds of surgical cases verify. Even on moral manifestations a decided influence has been observed as a case recorded by Dr. Wigan will testify: "A blow upon the head with a ruler changed entirely the moral feelings of a pupil. On examination the skull was found to be injured, and upon trephining, a bone, which had pressed upon the brain, was elevated, whereupon perfect recovery of mind followed."

Although Monomania may be found to exist in as many forms as Hallucinations or Delusions may exist, there are some not only of frequent occurrence, but also of medical and moral interest, so as to justify a special mention. Among these is *Homicidal Monomania*. Two

forms of this kind of Monomania must be acknowledged. 1. When there is no cause for the act except an irresistible impulse to kill, and 2. When an imaginary cause *is* present, or where some object is in view for doing the act. These two do not include homicide by idiots, which belongs to another consideration of the subject.

Homicide by an insane impulse is often brought up in court as defense of a criminal. Care must be taken to do justice in our discrimination. Although a person may commit murder under such an impulse and be perfectly sane before and after the act, we will generally find him or her to have done and acted things at previous times which indicate insane ideas and delusions. One case described by Dr. Skae reveals the truth of the existence of a sudden impulse to kill, for "she deplored in piteous terms the horrible propensity under which she labored." On the other hand we ought to be equally cautious not to consider a criminal insane without having a clue to see the insane propensity (Vide Forensic Medicine.) As for homicide, with imaginary causes, I can give you only a few of the latter, and of designs which these unfortunates feel, and by which they are forced to execute such terrible deeds. 1. A belief that some one intends to kill him or her. 2. In the belief of doing a christian act by sending one to heaven. 3. A revenge for imaginary wrongs or insults. 4. The illusion that voices are heard constantly urging to the act. 5. Mistaken identity for a person against whom there is a deep grudge. 6. Political excitement; saving the country by killing its enemy. 7. A morbid feeling of pleasure to kill. Some disease of the body producing temporary insanity, viz., epilepsy, puerperal state, and all diseases of the digestive track, uterus, heart, &c., are often productive of homicidal mania.

Suicidal Monomania is either a Monomania in itself, or finds its cause in another disease of the supreme functions of the brain. Let us see 1. A person in health, has an instinct for love of life; this instinct, when perverted by unsound ideas may result in love to take it. 2. A person in deep mental distress (Melancholia), when not debarred by the feeling of religious wrong, may be tempted to relieve the suffering by suicide. 3. Hallucinations and Delusions—a person hears and believes in a commanding voice ordering self-destruction, another sees an imaginary form leading him or her into a river; another is under the impression he must sacrifice his life to God, and various others. 4. In many cases suicide can be traced to sudden mental alienation, the result of bodily ailments—same as in Homicidal Monomania, also to remorse from habitual drunkenness.

The age at which most suicides occur is between 40 and 50 years. Some remarkable cases are on record where it occurred in children.

Men commit this act more frequently than women. The season when the insane commit this act is most frequently during spring and summer, and according to my observations almost invariably before the outbreak of a storm. The manner of committing suicide is most frequently, in hospitals by strangulation or a sharp instrument, out of

hospital by strangulation, drowning and firearms; in France frequently by suffocation with charcoal.

Kleptomania is an insane longing for other people's property, an irresistible impulse to steal, no matter how trifling the value, and no matter whether the thief is rich or poor. It is usually associated with other symptoms of Insanity.

Erotomania is essentially a disease of the brain accompanied with great mental and bodily depression and a low condition of the system. With it there is a morbid mental condition, wherein the imagination to love some body or some one overrules sound judgment. It is distinct from Nymphomania or Satyriasis, first—by the individual not entertaining lewd thoughts, and secondly—by none of the sexual organs being concomitantly diseased. Erotomania proper affects principally the young and ardent temperaments of great susceptibility.

The prognosis is not very favorable unless cured at the beginning, the patient rapidly emaciates and sinks.

Nymphomania is due to an irritation of the sexual organs in the female, caused most frequently by inflammation of the mucous membrane of the sexual passages, or by an eruption therein, or by an acrid and irritating flow, either catamenial or otherwise; it is also often the result of masturbation. Aside from the external passages, irritation of the Uterus or Ovaries may be set down as a cause, the latter producing hallucinations, such as imaginary cohabitation and the like. It is generally accompanied by great excitement both bodily and mentally, flushed face, restlessness and insomnia, and the special mental characteristics, lewd thoughts, utterances and acts so outrageously low and disgusting, as to throw the doings of the most depraved of public women into the shade. The acts of Nymphomania are too filthy to be mentioned.

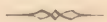
Satyriasis.—What Nymphomania is in the female, Satyriasis is in the male, and therefore little need be said about it. The cause is also irritations of the sexual organs, masturbation (very seldom the opposite-want of sexual intercourse, as stated by some). Prognosis of Nymphomania favorable, of Satyriasis less so.

Pyromania, or a morbid impulse to burn. This diseased mental condition with a *propensity to destroy things by fire* is seldom seen in a distinctive form, but associated with other forms of Insanity, viz. Imbecility, Melancholia, Mania, Monomania (Destructive Mania), Depsomania and Epileptic Mania. It is sometimes very difficult to ascertain whether the setting on fire is due to an impulse or to disease. According to Marc, it occurs mostly to young persons and has been by him attributed to an abnormal development of the sexual organs. This is problematical. To decide whether the act can be attributed to a diseased brain, we must carefully examine the general state of health in regard to the vegetative as well as the nervous organs, and look for spasms, epilepsy, catalepsy, &c. Like Homicidal Mania it does sometimes appear simply emotional, an impulse without intellectual disorder, or simply as a pleasure to see a blaze.

Dipsomania.—An irresistible impulse to intoxicate oneself. The means used are Alcoholic Stimulants, Opium, Haschish, and other drugs. In this subject we only admit such cases where cerebral disease is the sole cause of inebriety, and to come to a correct conclusion in regard to this, we must search for Symptoms, other than are usually found in a habitual drunkard; in other words, look for signs to lead to a conclusion of insanity. Irresistibility has been pointed out as the best diagnostic mark, but I think that this word will not help us any. Irresistible! When? when you cannot get any? then the Dipsomaniac and the Drunkard can alike do without it, and to get it both will use every means and trick, fair or foul. Better signs are the physical conditions, the sleeplessness, the soft quiet pulse, (so different from the drunkard), the cold moist skin and the prostration; another important one is its periodicity or intermission. During the intermission, the Dipsomaniac *hates* any kind of intoxicating drinks. To the chronic state of Dipsomania, as described by Hutcheson, I cannot say Amen. It is only a description of a drunkard by habit. Prognosis unfavorable. Post mortem appearance: effusion of serum in the ventricles of the brain and the arachnoid, atrophy of nerve fibres and grey substance, deposits of fat in liver and heart, also sometimes in the nervous tissues, in form of granulated patches. The mucous membrane of the stomach and small intestines are hard and thick, looking more like fibrous than mucous tissue to the naked eye.

Although treatment of insanity will be discussed in a special lecture, that of dipsomania cannot be well included in it, therefore a few remarks here. Restraint for a long while is undoubtedly the best remedy and has been the most successful. In case of great nervous uneasiness following the restraint, Aconite, alternated with Digitalis has been effective, and in case a substitute to supply the alimentary canal, particularly the stomach with a stimulus, is necessary, I believe there is nothing better than Chloric Ether with Nux Vomica. A very liberal nutritious diet of nitrogenized food must be given to the patient. Moral persuasion that the confinement and restraint is for his or her own good is very valuable as an adjuvant to medicine. All facilities to allow him or her to do some thing self-responsible. Particularly if a direction for managing his own affairs by writing can be allowed, it will act beneficially on the mental state.

DEMENTIA, IMBECILITY, IDIOCY AND CRETINISM.



LECTURE NUMBER FOUR.

When we examined the forms of Insanity as far as we have gone, you will remember that I constantly adhered to the first (progressive) classification. You will also remember the description of the mental states shared a decline, steady and progressive. When this decline arrives at a point of greater or less abolishment of the supreme cerebral functions it also arrives at the point of *Dementia*. To give an accurate description or idea of this state and stage of Insanity, let us detail a little more this definition. It consists of weakness of: first, the emotional centre of reflex action resulting in feebleness of affection or the affective life; second, intellectual centre of reflex action resulting in feebleness of developing ideas and of reasoning upon impressions; third, the reflex active centre of volition resulting in partial or complete loss of the dominant faculty of man, the power of will.

During the stages of mental depression, (*Melancholia*) and exaltation (*Mania*), there was a perversion of receptivity of impression, acting primarily upon the emotional faculties, but through the physiological laws of transmission of impressions to the ideal and volitional faculties, they become also (secondarily) affected and perverted, but when emotions were corrected the intellect and will would return. Now, in *Dementia*, the emotional centres are blunted, the ideal and intellectual faculties exhausted, and the power of the will sunk into oblivion, all caused by the previous strain brought to bear upon them during the course of Insanity, through the stages of depression and exaltation, and the normal action of these centres can no more return. They are in a state of functional progressive atrophy, leading to their complete paralysis and ultimate death.

But you will ask, do we not find this state to exist also in the Idiot, the Imbecile and the Cretin? This leads us to the diagnosis of *Dementia* from these three forms.

First—From Imbecility. We must state, as a *prima-facie* circumstance, that *Dementia* is mental weakness resulting from disease, and as a sequence to previously existing aberrations, while Imbecility is not a disease, but a *brain defect from birth*. Now, that defect exists in the cerebral functions, and they can only act to the extent of the little good there is in them, consequently there is a sort of equilibrium of all mental manifestations in ratio to the force with which the organs thereto are endowed. In *Dementia*, on the other hand, such an

equilibrium does *not* exist, as each centre of the sensorium occasionally exhibits unexpected isolated activities. Further, an imbecile is amenable to a certain degree of mental education. These are the main distinctions between the forms, and out of them the minor ones are easily conjectured.

Second—From Idiocy. The same remarks made on Imbecility are true here. It is only a question of degree. Here, too, there is a congenital defect of mental power, but that defect borders on complete want of force. An imbecile does things “foolishly,” but to the extent of his mental development “logically.” Memory is much better in the Imbecile than in the Idiot, while the former, understanding the *meaning* of numbers and can be taught to count, there exists great difficulty in the latter to do so. Hence it arises that the first is more tractable than the latter, and more impressible when taught.

Third—From the Cretin, the Demented, the Imbecile and the Idiot distinguish themselves mainly by no arrest of all further mental development after birth, while the former, such as he is, so he remains. The more a Cretin advances in life the more his idiocy is marked, not like an Imbecile or a true Idiot, picking up here and there grains for their mental treasury, for Cretins have none.

With these few characteristic diagnostic landmarks, let us resume the order of our subject: Dementia, and first its Symptoms.

This state of Insanity being an exhaustion of cerebral functions we must necessarily find this exhaustion to be either partial or complete, in the latter case evincing complete annihilation of mental force; therefore the course is a graded one, and the symptoms accordingly more or less decided. Dr. Tuke goes so far as to make three distinct divisions, which I conceive difficult to analyse, so as to be able to say where they begin or end. The main symptoms are: that before all, the incongruity of mental action, as noted in the stage of Mania continues, but without its previous explosive manifestations of action and violence. The patient therefore looks bewildered and stupid. This bewilderment leads him sometimes to acts of violence, in fact he occasionally becomes excited so as to make it difficult to decide whether the case is one of incoherent Mania or of demented excitement. Time or observation will soon reveal the true state. As a rule these maniacal excitements are short, and the actor soon resumes his bearing of stupidity. We find it impossible for the patient to concentrate his energies on one subject for any length of time, thoughts on it seem to wear out and wander. There is hence an inability to write a lengthy sentence correctly, or completely to finish any act requiring time. The action is like that of an engine with too small an amount of steam, it will stop half way.

The countenance of the patient reveals what he can do in the direction of mental action as soon as addressed. He or she may look quite indifferent before, but as soon as spoken too, betray their inability to bring together enough of affinitive ideas for an answer by their countenance looking puzzled, then weary, soon to fall back into

the previous insignificant appearance. It is thus wise: *I try, I can't, I give it up.* In early Dementia the patient has not yet assumed that want of observation of what is going on around him, and he makes attempts to respond to an impression, however blunt it may be, but the response is incoherent and before execution of what was intended, the original intention is dropped or left half finished. To give an example. A demented woman, sitting in a corner on the floor sees on the other side of the room an open window. This primary impression is received, the idea says (if only for the sake of contrariness) to go and shut it, she will follow, she gets up, walks towards the window, but—halfway has already forgotten the original impression, emotion and idea—and sits down in another corner. This loss of memory of things is however limited, strange to say, to things and acts occurring and conceived during their demented condition, as the great majority remember well what has passed during and before their state of depression or exaltation. This freak of memory is very characteristic of the demented, and shows that impressions made upon the yet active brain remained, but upon the exhausted and weakened cerebrum they gain no hold. It is like dropping bromine into a deep jar; before it reaches the bottom, it is a vapor and soon gone out of sight. It must not be thought, however, that the demented are motionless. The patient may occupy himself all day with something, but it is purposeless and exhibits the stamp of stupidity. Some carry objects from one part of the place to another and back again, others pick up all they can find from the floors, others again try door knobs from morning to night, or embellish themselves with flowers, or coins and decorations of various kinds, or have some other kind of strange propensity. Delapidated cases of Monomania often continue their peculiarities, so that I have known a case who thought himself Jesus Christ (while a Monomaniac) with all the airs a high priest could give himself; falling into a state of Dementia, he continued to insist upon being Jesus Christ but always with a meaningless, stupid laugh. Hence hallucinations are not infrequent, but the patient does not act accordingly, in other words does not follow up the idea. It would be useless here to begin to give you the various foolish things the demented pass their time with, some of which are enough to entice any one to laughter, for instance to look at one watching continually a clock, and jumping up with a hurrah every time the minute hands were on "XII", while another muses a dressed-up pillow for a baby, or a third takes everything, dresses, carpets, dish cloths, necklaces, shoes, &c., to the bath-tub and washes them. When further advanced in the state of Dementia these infortunates do not continue their activity as stated in the foregoing examples. Now they are silent or mutter only, nobody knows what. Generally it is only in short sentences constantly repeated, or oaths, or filthy expressions, all without connection with anything or alluding to any one; that part is probably hardly known to the patient. In that state they often crouch in some corner, and will not move till forced to bed. They become very careless of their

person, pass urine and feces wherever they are and into what they have on, dirty in every way and deed, and when very far advanced, actually lead a life less active than a clam. I cannot forget one case who would give only a grunt, one and the same always, when spoken to, who had to be fed like a child with a spoon and then told in a loud command to swallow, otherwise he would keep the food in his mouth till bed time; he had to be taken regularly to the water closet to attend to his necessities, he would not unbutton his clothes, all and everything had to be done for him, and when properly primed, the monosyllabic and unesthetic command to do the act had to be given in a thundering voice, or all the trouble would have been fruitless. The patient was full, fat and forty and not paralytic, neither was his inactivity obstinacy, it was Dementia.

As to the physical symptoms, little can be said. Generally the patient's health is good. The digestive organs are in good condition and the appetite is excellent. Sleep is sound, prolonged and refreshing and the patient generally looks hardy, the face full, but rather paler, than in health; in the early part of the stage, the conjunctiva is injected and the pupils are often dilated. Not all cases show this apparently good physical health. Either a lingering disease crawls upon them, or exhaustion from the past stages of insanity has told but too well on their constitution and they waste away. Paralysis also accompanies at times the state of Dementia. Muscular relaxation is almost constant in old cases, which account perhaps for the habit of crouching down in corners, so as to relieve the muscles from carrying the weight of the body.

Some authors speak of Dementia as occasionally occurring as a *primary* disease. For my part I do not believe this, and think that if the case is duly followed up from its very beginning, a depressed and exalted state can be traced, even if they lasted but a very short time. All other cases will be found to have their root in a directly physical alteration of the brain, be it by a blow, contusion, effusion, abscess, softening, or anything else that may have a direct traumatic or otherwise physical influence upon the organism of the brain. It should not be forgotten that mental shocks, such as fright, fear, &c., can through extraordinary action of the heart produce a partial apoplexy of the brain, from which another organic disease may take its starting point, thus permitting symptoms of Dementia to occur primarily, but resulting from the organic lesion inflicted upon the brain.

The duration of Dementia is as a rule *chronic*. Of course cases of Mania with great physical prostration may pass into temporary Dementia, when death will soon relieve the patient. But barring these instances the duration is long, cases being on record where Insanity began in youth, Dementia following soon, and the patient dying at 80 or 90. The fact is that when a Maniac recovers his bodily health without amelioration of his mental aberrations, it is looked upon as a sure case for Dementia and many more years of life. Aside from

taking injuries to the physical cerebral organism as a cause, we have no others except that Dementia follows Mania (including Monomania), General Paresis and Epilepsy. Only one, Intemperance, may be said to produce Dementia and then it is doubtful whether Dipsomania was not preceeding it.

By what you have heard it is needless to tell you that the Prognosis is almost always unfavorable. Some rare instances occur, however, in every asylum or private practice where some other disease, generally a severe one, mostly contagious and eruptive fevers, Zymotic affections or sometimes such of an epidemic character promote a cure. It has also happened, but rarely, that a demented patient takes, so to speak, a retrograde march in Insanity, *i. e.* a sudden violent outbreak of exaltation taking place and Mania in its full force of vehemence snatches him or her from the claws of Dementia, and, arousing the inactive brain to its functions, replaces a former *statu quo*, which, when cured, reinstates the patient among the mentally sane.

The post mortem examinations made in cases of Dementia lead to the discovery of a great variety of *pathological changes*, no doubt referring to previous stages of Insanity, but retained as an (so to speak) adopted child. The following are the most prominent in occurrence, and therefore more than others directly related to the state the patient died in.

The pia mater in a state of anæmia, effusion of serum in the pia mater, effusion and opacity of the arachoid, diminished weight of cerebrum in relation to cerebellum, diminished sp. gr. of the grey substance, grey matter pale, white matter firm, increased thickness of cranial bones. In most of the cases an atrophic state of the brain generally has been noticed, hence also more frequently anæmia than hyperæmia.

In regard to other organs than the brain we find, figuratively speaking, the scars of diseases existing during an antecedent state of Insanity.

Before leaving the subject of Dementia, let us make a few remarks on a mental state so often found in the aged alone, and which cannot well be classified among the regular orders of Insanity. I speak of *Senile Dementia*. This is slightly a misnomer, because it partakes more of mania than anything else, and has only received its name from the fact that it is attributed to the old age of the brain, which is supposed to be in a state of decline like the rest of the body. Old persons then, and particularly those who have gone through an active life and employed their cerebral faculties, are subject to a mental derangement, generally brought about by some shock, a catastrophe in business, disappointment of a projected plan &c., or, after retiring from business, on account of the loss of the activity the brain was accustomed to, or else on the other hand by overburdening it with what it can no more carry, and lastly often called forth after slight attacks of apoplexy or paralysis.

The two great peculiarities of Senile Dementia are: 1. The loss of memory of recent events. 2. The contradictory states of enfeeble-

ment and exaltation of cerebral functions. The patients are not depressed in spirits, on the contrary, generally joyous, communicative and excited. They have the propensities of a busy body, meddling in everything and waiting to demonstrate their wisdom about it. They are subject to wander about, but not like Paul Pry — “hope they don’t intrude” — no, *they think they have the privilege* of giving advice or making suggestions, or when up to some change in their own household will borrow things right and left. They are usually vain and the women even act coquettishly, they imagine themselves well off, consider themselves handsome, think they are boss of everything, and are generally quite unmanageable, because they are easily thrown into a passion by disobedience or contradiction of their orders. Varieties of imbecile acts, too many to enumerate, are committed by them and their imagination often takes a most ludicrous direction. A peculiarity of Simple Insanity is that it is not preceded by Melancholia or mental depression. The pathology of this disease seems to be a want of general tone of the whole system, the brain as well. The blood vessels seem to be relaxed and nutrition of all tissues defective. As the brain is the most vascular part of the organism, want of proper nutrition of the same is a sufficient cause to develop such a state.

Let us now drop the subject of mental weakness as the result of disease, and take up the mildest form of deficiency in the cerebral functions, *Imbecility*, which cannot be traced to any other previously existing mental alienation. This ailment, in our classification, is a *congenital* deficiency of the organic functions of the highest cerebral centres. Particularly apparent is the defect in the centre of Ideomotor reflex action. From birth the case shows that the faculties of emotion and intellect are developed, but not sufficiently enough for him or her to exercise the mental functions of a sane human being to that perfection which would admit an acknowledgment that the individual is entirely responsible. The degree of that insufficiency cannot be given except that it ranges between simply foolish and inconsiderate acts and the inability to draw inferences from a group of systematized impressions. It, therefore, is more or less a mild form of Idiocy, but as we desire to draw a margin for the better understanding of the subject, we will say that at this point Idiocy begins. The slight degree of reciprocity of impressions, with the corresponding appreciation of the same, will, of course, diminish the ability to form a correct idea whereupon to act. An imbecile, therefore, can think, but does it no farther than the impression has actually made at the present without any tendency to infer or traduce future consequences; he feels and reciprocates with apparent emotion, but only in so far as regards his own self, no consideration of the impression as received being applicable for further use arises in him; he talks even rationally, but not in a direction for higher aspirations, only limited to his own animal gratifications. Some are affectionate, not as a moral virtue, but because the patient has experienced much good from the one loved. Some evince great passions and uncontrollable desires without regard

of what consequences to others. Some are somewhat shrewd in the plan and execution of some hobby, but it is immaterial by what means that plan is executed; some of them even show signs of wit, but ridiculous as that may appear it lacks an intended applicability. The mental condition of many is high enough for them to be able to do considerable of the ordinary duties of life, to the extent at least of the mechanical execution thereof. They learn somewhat, and their reasoning faculties can certainly be improved by wise and careful instruction. Not only the occasional outburst of passion, but also hallucinations have made the demented frequently dangerous so that homicide, arson, &c., have resulted.

The greatest difficulty in imbeciles seems to be the ability of systematically arranging outward impressions to form a correct idea or judgment of them for something new. All the acquirements they have attained seem more virtues by habit than by moral self-persuasion. Hence it arises that an Imbecile can analyze what he has been accustomed to do with tolerable logic, but is unable to synthesize to do something new.

Idiocy.—What has been taught the Imbecile through experience remains unacquired in the Idiot, for he lacks the judgment. What he contemplates doing will be executed without foresight, because he is unable to speculate reasoningly. All reflex actions remain confined to the first impulse without previous reflections of feasibility of the act occurring; and of that act so little impression is retained that the recollection of it is not to be expected. Therefore an idiot hardly ever learns by past experience, and if from any previous act bad results follow it will not likely prevent a repetition. As the memory is very poor the idiot cannot associate any present idea with a past one, or an intended act with a similar one previously executed. Nothing shows an association, everything is done *per se*. This isolation from all ideas leads such a person back to purely animal propensities and desires, therefore eating, drinking and gratification of sexual desires are the influencing thought.

There are idiotic cases where only partial vagueness of intellect exists as if only part of the brain were affected. Such patients have then an extraordinary talent in some direction, mostly mechanical, such as carving in wood; or that memory for certain things is quite prominent, as for names or for history, &c., but very poor for anything else. Then again the idiot shows a propensity for certain acts or thoughts, thereby often showing a one-sided character. For instance, the one will steal what he can, another tell falsehoods, another be of a very irritable temperament with pugilistic disposition, and frequently we meet with dangerous characters liable to commit arson or murder. But it is to be remembered that, aside from these one-sided propensities, every other evidence of idiocy exists.

So far the milder cases of this mental stage have been described. Many idiotic minds lie much lower in the scale of cerebral force, and such cases will bring back to your memory that case of advanced de-

mentia described to you previously. Not that every one is as mute and indolent as that one, although some are so, but on the contrary part of them show a lively disposition and much activity, although the mind is at its lowest ebb, and what there is done is so void of sense as to preclude all appearance of anything intellectual. The dull idiot is not only morose, but of a really ugly and dangerous disposition, while the lively sort are tractable and good natured. Experience has taught that idiots are not insensible to good treatment and often are really attached to persons under whose care they are. Ill-treatment makes them malicious and disagreeable.

Some words on the general external appearance of these unfortunates. Undoubtedly there are cases and we sometimes meet them in our every day life, which offer nothing remarkable in their appearance. The large majority however have that characteristic vacant stare, features often distorted, large ears, curled lips, squinting of eyes or some kind of bodily deformity.

In many cases a defect of one or several or all of the five senses is noticed, sometimes they are quite obliterated. We see cases where the poor creature is completely deaf, dumb and blind. Such abnormalities of creation only live like a plant, only vegetable, are beneath any animal life, they can only perform movements and partake of nourishment by the assistance of another.

The anomalies of special sensation are often curious. Myopia and Presbyopia are frequent, Strabismus not uncommon, and many defects in vision are brought about by the Idiots interfering with normal functions of the eye, such as exposing them to the rays of the sun or pressing and turning the eyeball with the fingers and the like. Monotony seems to attract their fancy and they imitate such sounds. The taste is often perverted; they eat what others refuse, and delight in what would be disgusting to any one else. The same can be said of the organ of smell. Their feeling is dull and obtuse, so that what would seem extremely painful is often entirely disregarded and seemingly unnoticed by them.

The voluntary movements are also either sluggish or perverted, but always vague and often purposeless. Paralysis, convulsions, cramps of the extremities, tonic contractions of muscles, twitchings, are not unfrequent. Distortion of muscles, hemiplegia and even paraplegia are frequently associated with idiocy. One or more of these anomalies are nearly always to be found, so that but few idiots with a complete healthy organism can be met with.

The developments and physiological changes of life are generally retarded, such as sexual development and desires, menstruation, second dentition &c. The development of the head is frequently abnormal or congenitally defective, so as to have induced some writers to make two divisions—large and small headed idiots.

We must divide the *causes* of idiocy into three periods. 1. Before birth. In a majority of cases we are not justified in imputing the cause to the parents, although it is well known that a diseased con-

dition of the parent will influence the child, particularly diseases like syphilis, scrofula, epilepsy, rachitis and alcoholism. But if we reflect, we would ask, how many idiots ought there to be born if such were true once in ten times? It is probably more likely that a deficient hygienic life of the parents with want of moral aspirations and civic connections has an influence on the offspring's mental organism. A congenital deformity of the head is to be mentioned here as a cause. 2. During gestation and parturition. A cachectic state of the mother, fevers, and sometimes violent shocks to the mind during gestation may produce weakness of mind in the child. Further, any injury done to the child's head by instruments, pressure, traction &c. will induce similar results. 3. After birth and during early childhood. Ignorant or malicious maltreatment of child, injuries, diseases such as scrofula, rachitis, convulsions, &c.

Almost entirely based upon causation Dr. Ireland has made a classification of idiocy viz. (a) Hydrocephalic idiocy, in which he states Paralysis, dullness of touch and deafness are not uncommon. Prognosis of these cases—subject to considerable improvement. (b) Eclamptic idiocy, convulsions of children especially during dentition. Prognosis unfavorable. (c) Epileptic idiocy, Cases of this sort are usually intractable and malicious, Prognosis,—although amenable somewhat to education—unfavorable. (d) Paralytic idiocy. Prognosis, more subject to mental than physical improvement. (e) Inflammatory idiocy caused by inflammation of the brain. Prognosis—favorable. (f) Traumatic idiocy produced by injuries to the brain or its meninges, either by a fruitless attempt at abortion, or during parturition, or accident after birth. Prognosis variable. (g) Microcephalic idiocy. The smallness of the head may be due either to want of development of the brain or want of growth of the bones of the head with premature closing of their sutures. Prognosis favorable. According to Dr. Ireland they are more than any other idiots liable to physical and mental improvement by training. (h) Congenital idiocy. In these cases, which Dr. Ireland calls hereditary, malformations and abnormal development of the body are frequent. Prognosis, depends upon the amount of activity shown as an infant and particularly in regard to the tactile senses. If such are reasonable fair, a fair prognosis can be made. (i) Idiocy by deprivation, when two or more of the principal senses are wanting, most frequently the sight and hearing. Our deaf and dumb asylums and institutions for the blind have done much to ameliorate the condition of such unfortunates. To Dr. Ireland's last class of idiocy "*Cretinism*" we will now devote a special consideration.

Strongly allied to idiocy but peculiar in causation and symptomatic manifestations is that singular kind of depravity of sensory, ideal and intellectual exhibition of the *Cretins*. In them it appears that the whole nervous organization from the excito—motor system to the reflex action of the will is an organo—functional abnormality, exercising its abnormal influence on vegetative life during the growth and de-

velopment of the individual *ex utero*. The first question presenting itself is naturally whence arises this anomaly of growth? Now the fact that, although occasional sporadic cases of Cretinism do occur anywhere, the locality of the most of them can be traced to mountainous districts with steep elevations and narrow vales, such as occur in Switzerland, Savoy, Piedmont, Styria, some parts of France and of Southern Germany, it led first to the belief that moist ground and territory was the cause. But again the fact that in many regions of such development of ground Cretinism could not be found, led to many further and more scientific explorations on the subject, either by single individuals or by scientific commissions appointed for the purpose. Although these investigations have been very thorough the bottom has not yet been reached nor the subject exhausted. Nevertheless the conclusions arrived at by Morel, Grange, Sir John Forbes, the Sardinian and other commissions, the reports of travellers and geologists, the pathological researches of men like Virchow, are such as to permit of the now generally admitted theory that the presence of Alkaline and earthy salts in the soil and water, not to strongly bound by chemical and physical laws to other ingredients or among themselves, are, when in excess, the producers of what might be called a Miasma which retards the development of the nervous system. The principal elements seem to be combinations of Lime, and of Magnesia.

As in idiocy we find Cretinism to be graded. 1. Such as have purely a vegetable life, but not even capable of reproduction. 2. With a slight degree of sensory and intellectual development as far as is needed for their bodily wants. 3. Where intellectual faculties and power of speech are so much developed as to allow of limited employment. We can often recognize a Cretin during early childhood by the slow development of the body, swollen abdomen, thin extremities, excessive appetite, much sleep, retarded teething process, stupidity of countenance, large head and want of ability or independent efforts to move. In fact many are unable to walk before the seventh year. As the child grows we notice particularly the defect of articulation so common in Cretins and which is often not acquired at all. Only shrill, harsh and unmeaning sounds are uttered. Some or all of the senses are incomplete or wanting, and therefore a corresponding want of response to any impression and lack of irritation of what is tried to be taught. After the eighth year, when we may say Cretinism begins to develop to its maturity, we note the following: Diminution in the circumference of the cranium; Brachy-cephalic development (distance from root of nose to occipital protuberance short); appearance of face old and wrinkled, with projection of superior maxilla and retraction of the inferior; Goitre (an almost concomitant abnormality); retardation of growth of the body (therefore height not over three or four feet, rarely five feet, with evidence of impaired nutrition); absence of reproductive powers or at least incomplete erections; sluggish movements; undecided steps on account of insufficient co-ordination of motion, and lethargy of muscular activity; actions and

countenance of a complete imbecile ; great defect in speech or complete dumbness ; early decline of life, they seldom reach the fortieth year. In addition to these symptoms we might mention almost all those named under chapter of Idiocy.

You will naturally ask now the question, wherein is the difference ? First of all in the birth. An idiot (if his state is not subsequently developed by an injury to the brain) is a born idiot. Cretinism is developed gradually after birth. Signs of it are noticed variably from birth to the eighth year, if not by that time, it is tolerably certain that the individual has escaped the calamity. By this I would not exclude hereditary disposition. Facts prove that a semi-Cretin marrying another semi-Cretin, where issue was possible, resulted in the reproduction of a complete Cretin. Another diagnostic point between Idiocy and Cretinism is that the former can occur in any locality, while the latter is almost always endemic, seldom spasmodic. Further, two-thirds of all Cretins have an enlargement of the thyroid gland (goitre), which is not peculiar to idiots. Then again, in Cretins the constant coincidence of muscular with nervous inferiority of development particularly the want of co-ordination of motions. Lastly, the fair prospect of arresting the mischief done and sometimes affecting a cure in a Cretin by early removal from the locality of its incipency. This cannot affect an idiot.

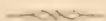
Prognosis.—When this disease is fully developed, or in other words, when the subject is not removed in its infancy from the cause of the disaster, it is very unfavorable. Much can be done toward ameliorating the condition of these unfortunates, as has been shown by Doctor Guggenbuhl of Switzerland, to whom much praise is due for his sound sense and activity in alleviating the state of these poor creatures, His institution at Abendberg is lauded as a model of its kind.

Before leaving the subject of *mental weakness* I wish to impress upon you the importance of this part of insanity, particularly the state of Dementia during your future studies of Psychological medicine. You can have no better subject for your study of insanity than a case of Dementia well recorded, for from it, by going back to its first cause and form, following its progress during depression and exaltation and its ultimate exhaustion and decline, you gain the clearest insight to the course of Insanity.

GENERAL PARESIS,

AND

INSANITY OF EPILEPTICS.



LECTURE NUMBER FIVE.

General Paralysis or Paresis is a disorder characterized by a simultaneous progressive diminution of the power and co-ordinate action of both the mental and muscular forces.

This disorder has received many long, and often either inadequate or confusing synonyms, which it is proper for you to recognize, they are: "General progressive Paralysis," "General progressive Ataxia," "General Paralysis," "General incomplete Paralysis," "General incomplete Paralysis of the Insane," "Paralytic Dementia," "Progressive general Paresis, &c."

This malady is usually divided by arbitrary boundary lines into three parts or stages: First, the stage of Involution, which is that part which is seldom seen by officers of an insane asylum; second, the stage of progression, showing particularly the characteristic symptoms of the constant diminution of mental and muscular powers; third, the stage of decline or dementia and muscular inability.

There is quite a dispute among observers, whether this disease manifests itself first in the motor or the mental symptoms, which I deem of very little importance, as the ailment is seldom seen by the physician in its very beginning and before symptoms of both motor and mental functions are recognized.

I will endeavor so to arrange the symptoms in succession as to give you as much as possible a fac-simile of a case, as you might meet with it. First, let me premise that the disorder occurs much more frequently among men than among women, never in children, and rarely before the age of 25.

A person of previous good health is observed to abstain occasionally from the usual daily vocations; in other words, to make a holiday of it, or to busy him or herself about other matters actually not necessary; it is noticed that the patient wanders from home, or if company enough at home to act as if more than ordinary importance ought to be attached to his or her presence, displays anything handsome and valuable in possession, occasionally covets and steals articles to correspond to or fill up a chain of extravagant ideas, states an intention of buying this house, or that horse, or something else of great value;

when "wandering among friends there is a disposition noticed to neglect those small points of decency coveted by the well-bred; for instance, he will enter bed rooms of others at unreasonable hours, speak about attending to his necessities before company, and even occasionally make indecent gestures, and in further advanced states expose his person. These points of indelicacies are in most cases unintentional by the patient, and are simply due to a want of control of the emotions, in some cases they are however intentional. On frequent occasions an unaccustomed indication of profanity is observed. This continual restlessness is not only manifested by neglect of needful duties, riding about among friends or driving to acquaintances, but also by writing letters to them, the contents of which not only show the ideas of extravagance and grandeur, but also manifest that want of co-ordination of ideas so frequent in those cases.

With this altered expression of feelings, ideas and acts, a slight impediment in the use of the muscular system is apparent, and which increases as the malady progresses. The patient stammers occasionally, the lips tremble as well as the tongue, the gait begins to show peculiarities, it resembles that of a sea captain, indicating in other words, an uncertainty where the next step would reach the ground; the patient's gait is also somewhat straddled. When trying to pick up or grasp some fine or small articles there is a trembling and uncertainty of pretension easily noticed. Among the first signs of motor paralysis I would state, even in view of the almost universal declaration of symmetrical paralysis, that a dragging of the left foot while walking has appeared to me as one of the most reliable. Contraction of pupil has been mentioned by Dr. Allbutt during this stage. The pulse is increased in frequency, but is not very feeble. After these mental and motor anomalies have been observed, the friends will sooner or later be astonished by an outbreak of excitement and rage, rendering the patient for a short time difficult of control. This is usually the occasion when a suspicion of insanity is aroused in the household and among friends and the opportunity sought to place the patient under restraint.

The asylum has often a very salutary effect, and the first remission takes place, which, if the experienced physician has not received proper report of his or her previous symptoms, will often lead to the discharge of the patient as cured or improved, only to be brought again under his care in a few weeks or even days. From this point an aggravation of symptoms is noticed, and the case is of more decided character. We may now say that the second stage has begun.

The motor symptoms now become very marked; there is an inability to mould the tongue for proper articulation, and to speak rapidly becomes an impossibility. Some words are pronounced only after considerable exertion, and the effort accompanied with that singular bending of the neck and twisting the head sideways and half around as if to assist with it that difficulty of speech. If the patient

is asked to protrude the tongue it is done with difficulty and a spasmodic effort, only to immediately retract it; or when told to keep it out, unsteadiness with trembling during the effort is very marked. The muscles of the face undergo an alteration, some being relaxed, allowing the opposite muscles unfair play, which leads to an expression not unlike that of a man under influence of complete intoxication. Twitches of the face are very common. I might here state that you will find many symptoms to be very similar to those of a drunken man, the detailed points of which will be mentioned under the chapter of diagnosis.

The restlessness mentioned in the first stage continues, even increases, and there is continuous walking up and down the hall and from one place to another. The peculiarity of that walk is now much more marked than before. The dragging of one foot is changed to the dragging of both feet, giving the patient a sort of shuffling gait.

As if conscious of the difficulty of bringing the muscles into proper co-ordinate action for progression, the patient appears to make extraordinary efforts to retain an equilibrium, walks without hardly lifting the feet, looks steadily at some self-proposed spot on the ground, as if he wanted to walk particularly in a straight line, and so as to be sure not to lose his balance, puts his feet flatly on the ground and separates the legs. Even his arms are sometimes used as if they were balancing poles, and the head kept strictly perpendicularly stiff, to be sure that its weight should not draw him out of poise. The whole gait has the appearance of a resolution to walk a chalk line, with all the manifestations of difficulty and defect to accomplish it. Although the gait will again put you in mind of a drunken man attempting to walk steadily, the difference is that the latter will make a dash for the point in object, the paretic does it with premeditated carefulness. So manifest is this carefulness, that he will neither eat, drink, talk, receive anything from others, &c., without first stopping and posting himself in his proper centre of gravity, and only when finished resume his walk. The same consciousness of difficulty of balance is evinced in rising from or sitting down upon a chair. It is a square act, always using both arms like crutches in support of the body to avoid one tubler ischi touching the chair before the other. When eating, the fork is held unsteady and tremulous, and the mouth wide open to increase the diameter of the target. The patient will drink with both hands holding the cup to keep it steady, and not infrequently allow part of the fluid to trickle down the deep folds running from the angle of the mouth, and which are so commonly noticed in looking at the countenance of a paretic.

During this stage of paretic infirmity, the outbursts of excitement and rage become more frequent and violent, with a decided disposition to smash things generally; between these attacks of anger he is however generally in the best of humor. Delirium is now also apparent, and although the patient has no hallucinations, he seeks to talk constantly upon a variety of subjects at the same time, thus

giving his conversation the appearance of a complete muddle in ideas upon many texts. When in a state of excitement the delirium leads him to unguarded expressions in respect to propriety and religion. Profanity and filthy talk are not uncommon, and passionate exclamations of all kinds frequent.

When not excited we find the lofty ideas of wealth and position lead him to the most unqualified assertions, which clearly designate the ebbing state of his intellect. The patient no more intends buying a house, a horse, a farm, but now says, I possess a vast tract of land, a kingdom, millions of money, fleets of ships, enormous power, princely estates. They say they own this or that building and cannot understand why they are not allowed to go out and give directions. Their ideas of grandeur go into most impossible domains, they speak of marriages with this or the other princess, give away millions of money, writing out checks for it, believe themselves of mental capacity equal to a Palmerston, a Henry Clay, or a Bismarck, have the strength of a Hercules and the powers of a first Napoleon. When asked how they feel, they say always well, splendidly, like a prince, couldn't feel better, &c., all in view of the fact that they are miserable, tottering, stammering demented beings. Letter writing, although at the beginning of this stage often attempted and carried out with all pompous assertions, now becomes difficult and soon impossible, as the hand is unable to hold and guide the pen, and the mind unable to guide the ideas. Days of mental depression intervene, wherein the patient is subject to terrific delusions, and often to attacks of crying. Here I may state that we meet occasionally with cases where depression is more marked than exaltation.

Loss of memory becomes now also very apparent, even so much so that the patient sometimes forgets his previous domestic and social position. The eye has now a somewhat peculiar appearance. It is dull and characterized by the vague expression of one deficient in the organ of sight. It is best compared with one congenitally shortsighted. The pupil which has in the first stage been found contracted is now rather dilated. But, like other irregular and incoherent actions of the muscles, the same is manifest here. The pupil is no longer perfectly round, but sometimes oval and occasionally slight indentations and elevations are observed. I believe Dr. Austin was the first to discover these irregular contractions of the iris. As the case advances general sensibility is impaired, and the special senses suffer more or less, particularly vision, touch and taste.

Many of the peculiarities of locomotion and manipulations of the patient can be explained in part by the defective power of vision. It seems to be more an unsteadiness and irregularity of the muscles which accommodate the eyeball and the lens to distances, and which concentrate the direction of both eyes on the required points. The pupil reacts sluggishly to light, and when in this condition it may be considered that the disease has fairly attacked the centres of excitomotor reflex action. The other organs of the body, except the heart

do not seem as yet to be affected. Digestion and appetite are good, the latter sometimes enormous; menstruation normal; sexual excitement which continued and was perhaps increased during the first stage is now diminished, and, according to some authors, obliterated. The heart's action shows increased activity as regards the number of contractions, but is inferior in force; hence the pulse is frequent, but feeble, and the sphygmograph shows us a report from which we are to conclude that the elasticity of the arteries, fibrous and muscular, diminishes with that of the heart. Respiration is also increased; both are more so in the evening than morning. In regard to the temperature of the body we are indebted to Dr. Macleod for very interesting revelations which are of great importance in the diagnosis and prognosis of this malady. He has, after careful observations, come to the following conclusions:

1. That although generally below par, the temperature of the body rises as the paralysis progresses.
2. That the temperature is much higher in the evening than the morning, often over 1 deg.
3. That the farther the paresis progresses the greater the difference between the morning and evening indications, sometimes as much as 2 deg. F.
4. That the higher the temperature and the greater its difference between morning and evening the shorter the period of life.

During or at the end of this, the second stage, we often meet with another remission either of cessation of the progress of paralysis of motor functions without an equally favorable state of the mental powers, or vice versa, that of the mental without the muscular forces, or of both. Such patients often return to their usual homes, but always have a relapse within a few months. Sometimes symptoms resembling apoplexy and epilepsy appear in this stage.

When the mind becomes so enfeebled that the patient cannot attend to his own wants, and when the muscular system is so paralyzed as to be unable to sustain the patient in an erect position, we may say that the third stage of General Paresis has arrived.

The transition is of course gradual. At first the patient finding an inability to stand will lie on his back for short and afterward for longer periods. He may once in a while arouse himself and keep up for a day or two, but soon remains in bed. The position which seems easiest for him is to rest on the back with knees bent; when replaced the legs will remain stretched for a while only to be drawn up again, until by contraction of the muscles they remain so, the thighs close to the abdomen; later a similar contraction of the flexors of the arm occurs. Other muscles of the body and such as are necessary for vegetative life are also paralyzed. Hence there is great difficulty of deglutition, involuntary evacuations and incontinence of urine. Muscular twitching of the face is increased and noticed in other parts of the body. The speech is almost entirely extinct. No notice is taken of anything around him, vision and hearing seem much impaired; taste

and smell are entirely gone and muscular sensibility and exito-motor reflex action steadily diminishing. They devour their food, whether the same is agreeable or otherwise, all distinction between qualities being out of question. Bed sores now appear; the blood vessels of thin membranes, such as the conjunctiva, show turgescence, and effusion under the skin and conjunctivas are frequent. As the body declines, so the mind. One word will express it, a complete Dementia.

The point of complete general Paralysis or synchronous annihilation of the vegetative and animal life rapidly approaches, and a lump of contracted flesh and bones, emaciated and already in a semi-state of decomposition is rendered to the grave. If no other accidental disease, or choking to death with food occurs, the patient dies of debility or Paralysis of the muscles of respiration. Epileptiform seizures, Apoplexy, Convulsions, &c., often carry the patient off beforehand.

Other forms of Paralysis, such as Lead Palsy, Mercurial Paralysis, Spinal Paralysis or the general locomotor Ataxia, can hardly be confounded with general Paresis, for one distinctive feature excludes them all: the mental decline and particularly the Delirium. There is one pathological condition, already slightly referred to, which it much resembles in some points, I mean the state called Alcoholism, or chronic alcoholic poisoning. First I will mention symptoms always present in one and not in the other. In general Paresis we find a good appetite and normal sleep, in alcoholism there is neither; on the other hand in Alcoholism we find defective digestion and frontal and occipital headache, in general Paralysis digestion is good and headache rare. The prognosis in the first is favorable and in the latter not so. As regards mental symptoms, we cannot easily mistake the extravagant ideas of wealth and grandeur of the paretic with exactly the opposite, humility of the drunkard. Again, Delirium tremens with the horrid sights and fears of persecution on the one hand, and delusion of golden ladders to paradise on the other. So far we have landmarks which cannot mislead. Yet there are two circumstances with which we meet at first sight, very much alike and very much confounding. I mean the manner in which the two walk and talk. When we look at a case of Alcoholism, when not in liquor, the motion of the legs resembles that of a feeble invalid and as being very tired, but the walk of the paretic is more like a man's steps in the dark. If we compare the tottering step of the drunkard with it, there can hardly be less distinction, because the paretic totters while making a straining effort to walk straight with spread legs, the drunkard stumbles over his own feet in the zig-zag he makes, and although both endeavor to walk correctly the paretic does so in a carefully studied manner, the drunkard in a careless and reckless way. The same deliberate effort made by the paretic in walking is as so noticed in his speech. A drunkard's subject and the manner in which he expresses himself, the disposition of contradiction are too well identified with his state easily to mislead.

The very logical and striking proofs, after a most careful examination of Dr. Sankey's remarks and experience, cannot leave much doubt that general Paresis is a disease "per se," and not an epiphenomenon of Insanity. As such it is entitled to a separate consideration in regard to causes.

Statistics, as far as collected, show that the disease is more frequent among people leading a disorderly life than those of a steady pursuit. It further shows that it is more frequent among the poor than the wealthy. When we examine the poor and disorderly living subjects, we will find that most of them drank heavily, thereby becoming poor, that they lived fast and indulged too much in sexual intercourse and thereby became disorderly. Or, crossing affinities, lived too disorderly, thereby becoming drunkards—and lived too fast, thereby becoming poor.

Ergo—1st cause by Statistics	Intemperance.
2nd " " "	Sexual excess,
3rd " " "	Both combined.

The next fact noticed by our experience is that persons whose occupation is not a steady one, and such who have not the need or opportunity to fix their mind upon some employment, which would lead to a definite result for later life, are among the next frequent cases affected of General Paresis. Laying that point down as a fact *per se*, we find that disorder to occur frequently among Sailors, Soldiers, Vagrants and those with no employment but a small estate to live upon.

So far as mentioned the causes seem to be more of a predisposing character. Let us see now how far the exciting cause, as stated by Dr. Austin, and confirmed by others, matches; in fact it just needs such persons as lead a public and civic life as I gave it to you just now, to work upon. Here is Dr. Austin's experience and statement of the exciting cause of general Paresis: "an acutely painful impression on the moral sensibility."

Is not the remorse and feeling of inferiority of the fast man, the drunkard, the disorderly and prostitute, a proper soil for above cause, or also the vague life and clouded hopes of a sailor, soldier or vagrant? Would not just such persons' moral sensibility be most easily impressed? The rich and high in station are not as easy subjects for such moral impression, and such as are we will place among the smaller percentage of causations.

Aside from the above stated circumstances we have to record accidental causes producing the disorder under consideration. The principal are: Sunstroke, injuries to the head, growths within the cranium, apoplexy, &c.

Prognosis.—Although recoveries have taken place, it was found that they did not last.

They were really only remissions, however some of them, for many months, even years. Only very few cases are reported as having ever been cured, and these few we must take with some grain of doubt

whether they were really General Paresis. As death is therefore inevitable, what is the percentage in proportion to other cases of Insanity. Some asylums having only patients of high standing in life and others the poorer classes, reports necessarily vary. About 18 per cent. of those dying insane belong to General Paralysis. The duration of the disease varies from one to three years. Cases of over three years standing are very rare, such of less than a year not quite so.

The morbid anatomy of General Paresis has occupied the attention of the most able men of our profession, first because its recognition as a separate disorder is modern and in its infancy of exploration; and secondly, on account of the interest felt to obtain a clue to the pathological cause of this fearful malady. Necessarily the observations have been somewhat conflicting, but the earnestness of investigation has led to certain conclusions, which, although primary in their nature, are certainly important as a starting point and basis for general principles.

The first to examine are the cranial bones; they offer no anomalies except as stated by Dr. Sankey, traces of increased vascularity in some cases.

The dura mater is sometimes adherent to the bones. Dr. C. Westphal has described this membrane as hæmatomatous, and having inflammatory signs of the meninges with thickening. The *Pia Mater* has been found opaque and thick in almost every case, and is frequently adherent to the brain substance; sometimes effusion of serum is seen, when the pia mater can of course be easily removed from the cortical substance of the brain. The arachnoid is nearly always thickened and filled with serous effusions.

The ventricles are found dilated, full of serum, the ependyma thickened sometimes in the form of granulations.

The appearance of the grey substance of the brain is darker than in health, and has an appearance of turgescence of its blood vessels; its consistence is not harder but tougher, so that it can be handled more easily than in health.

The white substance is according to Westphal and Griesinger firmer than in health.

The specific gravity of the brain seems to be diminished, but that of the cerebellum in relation to the cerebrum increased. Atrophy of the nerves of special sensation has been noticed, particularly the optic and olfactory. Rokitsansky insists upon an increased growth of the fibrous element of the brain, with glutinous fibrous exudations, but this view is strenuously opposed by other pathologists. Dr. Lockhart Clarke says he has found in the white substance numerous small round and oval cavities, which when cut through, leave smooth, sharp edges, like *Gruyere cheese*. He found them also in the Pons Varolii and Thalamus Opticus as well as in the upper part of the Medulla Oblongata. Dr. Lockhart Clarke believes them to have been perivascular canals or spaces which originally contained blood vessels whose debris has been absorbed. Dr. Westphal thinks that no finer

changes of cerebral substance can be discovered in General Paresis, and opposes the views of Robin, Wedl, Sankey, Gray, &c., who speak of perivascular lymphspaces, varicose capillaries, hyaline manifestations, &c., as pathological changes pertaining to this disease. He (Westphal) states that they are representations of a normal condition of the vessels, and further remarks that no particular discovery has as yet been made to lead to an inflammatory origin or process, except to stand in certain relation to a chronic inflammatory condition of the meninges.

Taking all the statements together we must arrive at an unsatisfactory conclusion in regard to the brain, and note that so far the minute changes observed in that organ are not characteristic enough to warrant the conclusion that they are essential or pathognomonic of General Paresis. The spinal cord on the other hand, gives us more definite results, and observations of Drs. Bucknill, Boyd, Westphal, Virchow, Magnan and others lead to the following summary: That the pathological changes are principally confined to the posterior columns, posterior commissures, postero-lateral and lateral columns of the spinal cord; that these changes consist of a gradual atrophy of the nerve elements of these portions, and a substitution in place of fibrous connective tissue; that this atrophy and substitution advances with the progress and intensity of the disease; that fat cells and granulated corpuscles are often seen; that the pathological states of the pia mater and dura mater, as observed in the brain, are also noticed in the spinal cord; that, excepting the state of the membranes, the pathological condition of the spinal cord is not continuous with that of the brain, nor vice versa; that from these observations we infer a simultaneous but independent existence of both a cerebral and a spinal disease of General Paresis; that accordingly a predominance of either motor or mental affections may exist. One thing seems to be certain that the pathological post-mortem appearances, whatever they be, are more marked in General Paresis than in other forms of insanity. Even from what we have seen we cannot deduce any local lesion or organic affection as a key to open the nature of General Paresis, and we must therefore agree and content ourselves with others with the general assumption that it is "a morbid nutrition prominently affecting the entire extent of the nervous system."

INSANITY OF EPILEPTICS.

The reason why I give this form of Insanity a distinct place is the same I gave for General Paresis. It is different in causation, mental characteristics and motor disturbances from true insanity and from parietic insanity, although the epilepticform convulsions may accompany any one of the three stages of insanity. We have, therefore, Melancholia, Mania and Dementia among epileptics.

It is not my object nor intention to give you a description of Epilepsy, as you hear that from the chair of Practice of Medicine better than I could give it. I only have to reiterate such points which have a direct bearing upon insanity.

The nature of this disease, like General Paresis, is confined to a functional derangement, caused by perverted nutrition. The locality of this functional derangement has been located by the most eminent investigators primarily in the medulla oblongata and upper portion of the spinal cord. The character of the derangement is one of excessive functional activity, preceded by irritability of these organs without organic changes. The result is loss of consciousness and spasmodic contractions of the voluntary and the involuntary muscles of the body. This spasmodic contraction of involuntary muscles, when pertaining to the respiratory and circulatory organs produces changes in the blood. Both a lack of sufficient quantity of blood or an overcharge of the same with carbonic acid, will, when affecting nutrition of the brain, produce coma or momentary functional paralysis. This coma, particularly when frequently repeating itself, or when entire and prolonged, will influence the fundamental evidence of the ideal and intellectual faculties of the brain: memory, the loss of which is the characteristic symptom following an attack of epilepsy. So far you have a picture of the general pathology of simple epilepsy. When before or after the convulsions or at both times symptoms of mental derangement manifest themselves, we call it Insanity of the Epileptic.

The first question to arise will be, how did the mind become affected? No positive explanation can be offered, but it is very probable that it is due to either or both of the following circumstances:

1. The repeated toxic influence of carbonic acid upon the brain must ultimately exercise a deleterious influence upon the integrity of its organic functions.

2. That the same cause which produced the irritability and excessive functional activity of the spinal cord and medulla oblongata, producing perverted muscular activity, will sometimes act on the higher centres of the nervous system and produce perverted excessive activity of the ideal and intellectual functions; or else, what is also probable, that the perverted activity of the lower centres of the nervous system is propagated through its chains of affinity, the connecting nerve fibres, to the higher centres inducing the same irritation and excitement.

Epileptic Insanity, in its mental manifestations, is like ordinary insanity, divisible into three forms: Melancholic, Maniacal, and that of Dementia.

Melancholia is the rarest form and has generally a religious tendency. A peculiarity about this form is that the excitements in it follow and never precede the convulsions.

Maniacal excitement is the usual and very dangerous state of Epileptic Insanity. The state of cerebral excitement may precede or follow the convulsions or manifest themselves both before and after.

The violence of the maniacal excitements are beyond that of all other forms. The patient will suddenly and without any warning, sign or provocation throw himself on the first individual he sees, strike

with whatever he can reach or with the fist, sometimes bite, kick or throw things; in this blind fury, murder often occurs; if no person is present he will make furious cries, throw things about and break articles generally, and the person looking after the disturbance may inadvertently receive severe injuries.

Sometimes a slight change of color is noticed before the attack, and, in exceptional cases, the patient complains the day before of being indisposed. This state of excitement may last but a few minutes or continue for hours, when the convulsions begin. Generally not one, but several attacks of convulsions follow each other, often without the patient getting from the bed upon which he has been placed, as each attack is followed by the usual state of coma, which, in itself, may last for hours. It therefore occurs that when an epileptic has his attacks, as it is called in our institutions, sometimes days elapse before he is himself again. After the convulsions are all over, and the sleep following the coma has subsided, a state of stupor usually sets in, in which it is best to leave the patient alone, as by provocation renewed attacks are apt to follow.

Memory of what has passed before the convulsions and during excitement is entirely gone, and even if the patient has committed homicide no recollection of the deed is left. Some epileptics have a second outburst of violent mania after their convulsions which breaks out as they gradually recover from the coma. This excitement is, however, as a rule, not so intense in sudden acts of violence and gradually tapers off into a quiet state. After such attacks of mania and convulsions the patient is very feeble and complains of headache. The frequency of epileptic attacks varies. In some instances they seem to cluster together, frequently appearing within a short space of time, when long intervals will follow. Between these attacks the patient will be seen to gain in strength and general appearance, but not enough to balance the extreme prostration which followed each attack, so that the sufferer sinks very gradually in body and mind. Curious anomalies of attacks occasionally occur where either the convulsions or the mania is wanting. It seems that the cerebral excitement then acts as a substitute form, and we may be justified in this assertion, because the mental symptoms are exactly of the same character as previously, when accompanied by epileptic convulsions, and also because these isolated attacks correspond to about the time when an epileptic attack is expected.

This last assertion leads us to a form mentioned under the head of Epilepsy, and called *Epilepsia Latens*.—This is a state of periodic attacks of maniacal paroxysms, in nature like those of the Epileptic mania, and with homicidal propensities, but without any manifestation of epileptic convulsions whatever. Now the question has been debated whether Morel, who first recognized these patients as epileptic without convulsions, should be sustained in his opinion, or whether they should be classified among the cases of Insanity with remissions.

The following reasons would justify the opinion that these violent

maniacal symptoms should be admitted as epileptic. First, the sudden invasion of the attack without more warning than the attack of epileptic fits. Second, the regularity and periodicity of the attacks. Third, the fact that in some cases regular epileptic fits occur in a later period of life either in place of, or with the mental symptoms.

A few words yet on Epileptic Dementia. In this state the patient is no longer able to take care of him or herself between the paroxysms. The continually repeated violent excitements have worn the brain out and made the poor creature demented. The maniacal outbursts however continue, and we dare not diminish our watchfulness to prevent accidents. The patient, already reduced to a mere skeleton, will after severe suffering, die usually in one of the paroxysms, which invariably increase as the case progresses. In some cases they are almost continuous before death.

The causes assigned to Epileptic Insanity are the same as those for Epilepsy proper.

The disorder in question is more frequent in women than in men.

I would say finally, that such cases of Insanity in which, after long duration, epileptic attacks supervene, cannot be classified among the above, as the symptoms differ and the fits are a secondary result of the mental excitement.

TREATMENT.



LECTURE NUMBER SIX.

You may think perhaps that to devote an entire lecture to the treatment of Insanity, and to go into the details of experience which Insane Asylums have taught us in the management of the Insane, is superfluous; particularly so, because our advice to you is to send each of your insane patients as soon as possible to a public institution.

My reasons are:

1. Knowledge of managing the insane will greatly assist you in cases of general practice where delirium and other symptoms of temporary alienations of mind occur.

2. As a family physician, when you should meet with an insane Diathesis, the prophylactic treatment, of which you will soon receive some suggestions, will be of value to your reputation and the good of the patient.

3. Information on that subject is particularly valuable in case you notice or are confronted with an actual outbreak of insanity, because, even if the patient is ultimately sent to an institution, your proper initiation of treatment, will indirectly benefit him or her, for it facilitates the continuation of it by the physician of the hospital.

4. You sometimes will meet with cases where the friends are wealthy and object to an asylum, but prefer the large expense of a proper arrangement for a treatment at home. And I may here sophistically add, that the cure of such a case under these circumstances is a very large feather on your hat.

5. I consider it of no mean value for such of you as are young and have the means of waiting for general practice, to spend a year or two as assistant physician in an institution for the treatment of the insane. You have there the best opportunity to practise the diagnosis of internal maladies by objective symptoms and circumstantial evidences, besides learning to subdue feelings and passions.

Before the middle of last century there existed actually no Medical treatment for the Insane; they, if thought to be unoffending, were allowed or rather compelled to wander about, the subject of mockery and occasional charity of the public, but when known, or only thought to be dangerous, or when in a state of excitement, they were arrested, brought to prison, flogged till the excitement yielded to the pain of the wounds and submision was effected, when they were thrown into a cell or dungeon with a little straw in it, chained and fettered and allowed but scanty nourishment, till death relieved the poor sufferers. Towards the second half of last century the governments of Europe

began to construct separate buildings for the insane, which they called Mad-Houses, and which were in some instances placed under the care of a physician.

These mad-houses were built like prisons of heavy stone walls, iron doors and bars around windows and high stone walls encircling them. This improvement, as it was then called, was really none for the poor lunatics.

The idea that the delusions and excitements must be subdued not only by main force, but by fear from dreadful tortures brought about the most inhuman treatment. The violent patients were kept handcuffed or with a ring around neck and body, chained to the wall or upon their bench or chair and often on the floor.

They were kept but half nourished in cells, sometimes three or four together, with no other furniture but some straw and a blanket.

Their nourishment was often given to them as to wild beasts in a cage, through a wicket in the cell. Their straw was rarely changed and they were allowed to lie in their own filth.

When they had to be cleaned they were led to the washhouse and mopped with cold water and a broom, naked and shackled. The supposition at that time was, that the only means of cure was so thoroughly to change the course of thoughts of the lunatic by extraordinary impressions as to force the delusions out of his brains. Therefore the most horrible tortures were practised. They were flogged to wring another but their delusive confession from them; they were placed in what was called the rotatory chair, where in a sitting or lying position they were whirled around with great velocity so as to become by giddiness and rush of blood to the head quite unconscious, which was then thought to be the state proper for the patient to begin with new ideas, as the old ones were thereby subdued. Other means to the same effect were employed. Sometimes they were marched over a plank in the floor, which, suddenly giving way, plunged them many feet down into a cold water bath. On other occasions they were held under water up to the nearest point of suffocation, supposing that the fear of death would promote a cure. Or they were subjected to an ice-cold douche bath and other tortures of the kind.

This state of things continued until the commencement of this century. Pinel, physician in charge of the Mad-house at Bicetre, France, and whose name has become immortal in the history of psychological medicine, convinced not only of the inhumanity, but also the irrational method and uselessness of this treatment, began to unchain these unfortunate persons, to treat them as other human beings, and to bring about a complete revolution in the treatment of the insane. And behold it was found that these lunatics were mild, thankful, tractable beings, and not wild beasts.

Dr. Tuke, who took charge of the York Retreat, built and kept under the auspices of Quakers, followed Pinel's inaugurated humanity towards the insane and began the change of treatment in England.

Since that time one asylum after another in all the civilized countries abolished barbarism, but strange to say it was not until 30 years ago, that this inhuman treatment was completely out of sight in all institutions. At the present day, even the camisole or straight jacket is becoming out of use, and restraint used only in cases of emergency, during great violent attacks or attempts at suicide, and then only temporarily until the patient becomes calmer. So much for the history of asylum treatment of the Insane.

We will now take up the subject of rational treatment. I call it rational, because it was not until these abuses were checked that scientific and intellectual researches in regard to the true physical and psychical state of the insane could be instituted.

The manner of treatment at present must be followed up in three different but inseparable directions: 1. Moral. 2. Hygienic. 3. Medicinal.

Moral treatment.—To the points in the moral treatment I would wish you to pay particular attention, because it will be your duty as physicians to inculcate them upon whoever is attendant upon an insane patient, be it as hospital, or private nurse, or a friend. The first and most important so-called moral treatment, which means measures to impress a patient's mental disposition, is to give the mind rest. This can be done best by removal from home to a quiet place, where no communications with matters and things that might annoy the patient exist.

There is no better place than an institution for the cure of the insane, usually called the "Asylum." Before going into the advantages of such a place, I cannot but suggest to you never to use the word "Asylum" to a patient. That name develops too easily in a patient's mind the idea of restraint, prison and the like.

Works of fiction have so often produced an abhorrence of such a place in sane individuals, and by the previous treatment of the insane, justly so, that evil thoughts are somehow connected with the hearing of the name. Let us call such institutions "Hospitals," and it will impress the patient that he or she is brought there, not to be placed in confinement or under restraint, but to be made well.

The reason why an insane patient should be removed to a hospital as soon as possible, is to separate him from domestic cares and business annoyances. That a violent maniac should be removed is easily impressed upon the friends, even desired by them, but we often find much difficulty to convince them to bring the quiet melancholic to such a place.

It is just this, the first phase of insanity which is much benefited by that step. There are so many things occurring at home to excite a patient, such as monetary matters, domestics, small children, visitors, or if no more than the door bell, &c., that there is no rest at home. Besides it so often occurs that delusions about friends and relations around them exist; for instance, they believe that they conspire against the patient, want to injure or poison him and the like,

and this fear often occurs although not expressed, that it becomes an absolute necessity to change quarters.

Now, in removing a patient to a hospital, all deceit should be avoided. It must necessarily be of the worst of consequence to one who already entertains a suspicion towards his relatives and friends, when he finds that instead of a ride to the country or an excursion to a place of amusement a mad-house was the object. Better make first of all the necessary preparations, have the vehicle at the door, convey the patient to it, and when asked why and where, tell him or her that it is better for the restoration to health to be placed in a hospital. By kind urging of all around the patient will soon find that remonstrance is useless and he quietly submits. This, when rightly and judiciously executed, will succeed in a large majority of cases; if not, the mildest force possible must be used. All manacling and tying must be avoided.

In regard to the choice of a hospital, I would advise the preference of a large institution to that of small so-called retreats which are mostly private concerns. There is not only more quiet, systematic and military-like order, so salubrious to an excited mind, but the patient is much less exposed to observation.

At home he was the focus of all fussing; in a small hospital, where only four or five patients are in a ward, he will, upon entering, be a point of novelty and diversion to these and proportionately annoyed, while in a ward of a large institution the patients as well as the nurses by the daily occurrence of new arrivals feel no more the interest in the novelty, and he becomes only that fractional part of observation that he is in number to the rest in the ward.

Another plan to divert the patient's mind by removal is to travel. Unless one, or if possible two, (according to the nature of the case,) attendants of proven ability and experience as well as integrity can be found, such an attempt should be abandoned, because it is fraught with many accidents and dangers. One attendant is hardly enough, because if his or her duty is properly done it is too irksome not to require rest.

Sometimes the friends or relatives, while opposing a removal to the Hospital, consent to place the patient somewhere in the country. A good attendant should accompany the patient and the management not be left to strangers. A quiet, private family without children, residing in a quiet but cheerful country place should be selected. A country seat belonging to the family is by far not as good and not much improvement on the city home.

Wherever placed, the new home should be made as cheerful as possible to the patient, so that immediately upon entering, all notions of suspicion may vanish and an impression be left that what was promised is being done, i. e. to do him all the good possible to make him well. The proper associations should be sought for the patient; hence it is of vast utility to properly assort the wards.

A gentleman of good education and breeding does not feel comfor-

table with roughs, no matter if both classes are insane. Therefore it is also of importance in a hospital that the best educated nurses should be put in corresponding wards, and that patients of such a class, even if one or two are a little noisy, should be kept together.

Should the patient board in the country and his state of mind allow it, association with neighbors, &c., can be allowed, but it is to be watched, so as to discontinue it if any mental excitement should follow. All visits from relatives and friends must at first be avoided and subsequently granted according to the nature of the case. Occasionally it does the patient good, but as a rule, frequent visits at least, are injurious.

Occupation is one of our best moral medicines. As soon as being what is called acclimatized, the patient must be invited, even urged, to do something, but never be compelled. The best occupation is one out of doors and should be selected according to the patient's previous occupation and habits.

Consideration should also be had in regard to the enjoyment the patient has in what he does. One finds pleasure in working in the fields, another in the stable, or with the hospital carpenter, while some want to sport, go fishing, rowing, playing ten pins, billiards, &c.

If such amusements can be granted and occasion offers we must take advantage of it. But always if possible out of the house. It is much better for a woman to go to the garden or field and nurse flowers and hoe corn than to sew in the ward, or for a man to be behind the plough or row a boat than to play checkers or wash dishes.

One of the first qualifications of a good attendant is watchfulness and a disposition to be observant. Particularly must it be exercised upon a new patient. It is through those who are all day about a patient, that a physician must accumulate the evidences to form a proper opinion of the case. Every peculiarity of speech should be observed and reported to the physician, not only for the latter's guide for treatment, but also for the attendant himself, so as to be able to tell how far he must extend his watchfulness, or in what direction to give the patient employment.

Many patients are disposed to commit suicide, and when they ask for articles wherewith to commit it, or even which would form a link for a chain of suspicion, extra care and watch must be taken. If for instance a patient insists upon making his own bed, which he never liked to do before, you may be sure there is something at the bottom of it (the bed). I have known a patient gather all pieces of cords, shoestrings, strips of cloth, &c., and was afterward found to make a strong rope of it, with which we suppose he wanted to hang himself. To show you how useful an observant eye is sometimes in the treatment of Insanity:—There was in the ward of one of our hospitals, a man under treatment for Melancholia, aged 28. He had been a patient there for nearly two years without much improvement. It happened, that another patient, whose only insanity consisted in irresistible

mania for opium eating, but who was a very jolly fellow, and having lived fast and being fond of talking, often gathered around himself in his own little room the attendants and some of the more intelligent of the patients and treated them to stories, some of them not the most aesthetic. It happened that on a certain day the Supervisor coming through the ward, observed that our Melancholic patient, who previously seldom left his own room, standing in the room adjoining the one of the story teller's with the door half-open, evidently listening to a yarn the latter was relating. The Supervisor called an attendant and gave orders to urge the story teller (an intelligent man) to go to the Melancholic's room next day alone, to shut the door and to tell him some yarns privately. It was done, the former got a good laugh out of the latter, the backbone was broken and three weeks afterwards the Melancholic was discharged cured. He is conducting a business in Baltimore now and is making money. Had he not been observed to listen, the ruse of sending the story teller to his room would never have occurred.

The above also shows the propriety of mixing the depressed and exalted patients together. It will never do to place the melancholic in rooms adjoining or too many in one ward. Nothing is as wholesome for the mind of the insane as cheerful attendants and companions, and much should be done in that direction.

The question of propriety and usefulness to give concerts, balls and other amusing entertainments has arisen. I am decidedly against balls, and although having no objection to concerts, do not believe that good music is appreciated but by a very few. Besides, good music is something rarely to be obtained in a hospital. Humorous and at the same time entertaining lectures, exhibitions of good stereoscopic views and accompanying explanations, amusing theatrical sketches, which are strictly within bound of propriety, are very good entertainments for the insane. The evening, say from 7 to 8 o'clock, is the best time, so that the patients can retire, if possible, with diverted thoughts and ideas.

Persons attending upon the insane should avoid all direct contradictions to the delusions of the patients. Not only that they are useless, but also directly injurious, for they excite the patient. There is no use in calming a mad bull by shaking the red cloth. It takes some tact to get over the difficulty of neither consenting to nor opposing the delusions. The best plan is entirely to ignore them, and to wait for an opportunity to show the patient by his own doings that his error is self-evident. The inconsistency of perversity of the insane is of so frequent occurrence that many occasions arise to prove their error.

It is also a fine point how to force a patient to do anything when obstinate in refusing, and how to subdue a maniac when the violence of attack becomes dangerous to himself or others.

The first is usually obtained by kind but decisive urging and making the patient understand that obedience is necessary and then to

leave him or her to execute the order, without observing or wanting to notice his obedience. When to subdue a violent outbreak force must be employed, and that should only be used when all persuasion has failed, there ought to be persons enough to take hold of the patient, so as to convince him that all resistance is useless, when he will generally yield without a struggle.

The non-restraint system is now introduced in nearly all hospitals, so that the best manner of avoiding danger is to lock a patient into a room devoid of furniture or anything else with which an attempt of suicide could be made. In hospitals there are chambers sometimes padded, where light and air enter through a window out of reach of the patient. Some have compartments in the open air, but surrounded by a high wall, where such violent patients may be left during the day. It often occurs, particularly in recent cases of great violence that the attack is followed by a sudden collapse, it is therefore necessary to have some small opening in the cell through which the patient can be frequently looked after, so that in cases of emergency, no time for medical help may be lost, or else the life of the incarcerated maniac may easily slip through your fingers.

So-called dark rooms are also found in hospitals for the insane. I do not approve of their use except in cases of what we might call hyperaesthesia of the optic sense, where every object around the patient seems to make a painful impression and incite to violence. In such instances the dark room is often serviceable and may produce calmness and sleep. But wherever seclusion is used it should never be continued beyond a time actually necessary. In all cases of obstinacy, decision of authority without anger on the part of attendants, together with a sufficient exhibit of strength in numbers, will, in nearly all instances, have more effect and is always better for the patient than the physical strength of one man to subdue the obstinacy.

Hygienic treatment divides itself into three points to be observed.

1. The locality or domicile where the insane are treated.
2. The occupation allowed them, already referred to under "Moral Treatment."

3. Diet.

Wheresoever the locality the patient is placed it must have the same advantages as a large hospital offers: it ought to be situated on a moderately elevated position, built on healthy, and, if possible, hard or rocky ground, not too far from a town where all necessities can be had, and neither too near nor too far from the friends at home. For a course of lectures like the present it would be out of place to give you a description of a properly built Insane Hospital, particularly as you can at any time instruct yourself on that subject by personal inspection. Four items are necessary for all domiciles where insane patients are kept, the execution of the details of which are left to the architect. They are, however, so directly connected with the treatment of the insane that the plan of the building should be made under the supervision of a capable physician. They are:

1. Advantages for proper ventilation, and the building of compartments of sufficient air capacity, at least 800 cubic feet per each inmate.

2. Proper healthy heating apparatus.

3. Sufficient and proper drainage.

4. Sufficient supply of pure water (40 to 50 gallons per inmate.)

Having disposed of the occupation of the patients under the head of moral treatment, all that we have to look to after is, that the necessary implements for the execution of that part of hygienic means are at hand.

Lastly, a few words upon diet. Physicians of experience have all come to one conclusion on that subject.

The food ought to be : P. P. P.—plenty, pleasant and plain. A diseased brain suffers of waste and tear, hence good digestible food and generous in allowance is recommended. It also should be cooked to entice to eat and served invitingly enough to assist the appetite. A proportionate selection of animal and vegetable food with good bread, and when changed daily in variety of kind, excludes the necessity of having many different kinds of food in one meal. Plenty, pleasant and plain is all that is necessary and of service to the insane.

We have under consideration the treatment of a disease arising from a physical and functional disorder of one or more organs of the body, and the administration of drugs with the object to counteract the characteristic expressions of the disordered organ is no less the duty of the physician than to operate upon mind through mind; hence the *medicinal treatment* is as important as the moral, even if the diseased organ is the one from which arise mental manifestations.

When any organ is out of order, two objects are constantly to be attained: 1. To place the organ at rest and thereby to discontinue its abnormal action, and 2. To remove from influence on that organ the proximate exciting cause which brought it out of order. In this case the brain being the organ to be put to rest, and sleep being the best evidence of rest, the sleep producing drugs or narcotics are and have been the first to draw attention. But as the manner of action of these narcotics on the brain is as different and various as the action of the causes which produced the disorder, therefore the selection of the drug is far from indifferent. I will endeavor to give you some indications for the use of narcotics to counteract the activity and sleeplessness of the insane.

Opium,—the greatest known of the narcotics, although useful in many cases, is not a paramount drug in Insanity. Examine its action carefully and you will find that it produces first an excitement of the nervous system, particularly on the brain, which soon subsides, and sleep is the result of overaction, like as in Alcohol, only more rapidly. This stimulating action upon the brain already makes its use incompatible in cases of acute Mania, with a flushed face, high pulse and an exalted state of the brain, and even if it should in very large doses produce ultimately sleep, it is the sleep of temporary exhaustion by

necessity, resulting from a drug which has aided the overactivity of the brain. But not only should it be avoided in cerebral Hyperæmia, but also whenever affections of the heart are concomitants. A long continued use of it is also objectionable on account of its retarding digestion and the influence it exercises upon the alimentary canal, producing either diarrhea or constipation. This drug is of more benefit in such cases where some deep seated and exhausting disease seems to be the dragging anchor of insanity. Such patients of Melancholia, Monomania, Hypochondriasis, &c., whose appearance is haggard and of earthy color, who suffer from pain, have little sleep, or when cancer, internal tumors, chronic inflammations internally, tuberculosis, &c., are connected with the brain symptoms, they derive benefit from opium by procuring sleep, alleviating pain and allaying cough. In the form of Dover's powders it often has more effect and is of less annoyance in regard to headache following it, than in other forms. I have found it of great value as Dover's powder in Erysipelas.

Conium.—This is the most important of narcotics not only as an alleviating, but as a curative agent in insanity.

The preparations we used were the succus conii, an imported article prepared by Ramson, Hitchen & Co., and the fluid extract made by Squibb, of Brooklyn, N. Y.

The dose of the succus which will produce the physiological action, is from a drachm to an ounce, according to the motor activity of the patient; men require larger doses than women. The dose of the fluid extract is from mxx to a drachm; mxx of the extract prepared by Squibb is equal to about a drachm of the succus conii.

From experiments we observed that the temperature and pulse are both lowered without any apparent effect on the respirations. In these investigations we have administered and carefully observed its effects in 150 different patients, embracing cases of Mania, Melancholia, and Hysteria. In attempting to appreciate correctly the physiological effects of conium, particular regard and attention must be given to the preparation used. Conium has a variable reputation as a medicine, caused mostly as we think by the uncertain preparations so long employed.

It is only within a very recent date that reliability could be placed on any of its preparations. Harley was the first to give any really satisfactory experiments to the profession, but all *Materia Medica*s speak highly of the drug when a pure article is obtained. The fluid extract is more commonly prescribed on account of its comparative cheapness. The succus conii is much more expensive and for various reasons more difficult to secure of a uniform character. In these experiments both with the fluid extract and succus, we have not failed to obtain a well marked sedative effect after a full dose; though using it largely, we have not discovered any injurious effects, as symptoms of poisoning, described by some of the older writers.

The succus is more palatable than the extract, and rarely, if ever, produces any unpleasant effects, while in a few instances the extract

has caused slight nausea, even though well diluted with water. After administering these two preparations in different vehicles, we conclude that ice-cold water is the best. We have taken the temperature in a large proportion of cases, which showed an average reduction of from one to two degrees after the full physiological effects are induced. No appreciable effect is observed on the respiration, and no change in either quantity or quality of the urine.

The general effects of conium as given by all writers are very much the same. The most prominent we have observed, after repeated experiments, are general muscular relaxation; after the relaxation, quietness followed by calm sleep. The following physiological effects are observed in from ten to twenty-five minutes after a full dose is taken:

1. Suffusion of the eyes and injection of the conjunctivæ.
2. Giddiness and sensation of weight along the orbit.
3. Dimness of vision and dilatation of the pupils.
4. Inability to mental effort.
5. Languor, muscular weakness, with a strong desire to assume a recumbent posture.
6. A dragging sensation in the limbs.
7. Pulse and temperature lowered.
8. Gentle glow of perspiration over whole body.
9. Usually in half an hour the ordinary patient is asleep.

The majority of these sensations are observed in every instance. The whole motor functions of the patient under the influence of conium pass into repose. Harley says, conium, in a state of health and in the fullest medicinal doses that can be given, exerts its power chiefly, if not exclusively upon the motor centers within the cranium, and of these the *corpora striata* are the principal parts affected. This appears in the great rapidity with which the paralyzing influence radiates through the body; so sudden and powerful is its action in full doses, that sometimes if the patient be standing at the time of its accession, he has scarcely time to throw out his arms and lay hold of some support to prevent himself from falling; and in lesser doses there is sudden depression of muscular power. Again, many patients experience when the action of hemlock is at its height, a dull aching pain across the brows, over the roofs of the orbits, and at the back of the eye balls, sensations manifestly referrible to the *corpora striata*.

We have failed to discover any direct hypnotic action in chloral hydrate; yet sleep follows very rapidly, as it almost always follows muscular relaxation, and in a natural way. Patients describe the sensation produced by a dose of conium, as one of general lassitude and languor, and many compare it to the sticking of pins or needles in the flesh, or to the sensation produced by passing a comb or brush down the back. One very intelligent patient, in half an hour after taking one drachm of the fluid extract said it reminded her of the sensation of a gentle interrupted current of a galvanic battery. Patients readily become accustomed to its use, and in a few days do not mention any unpleasant sensations. Those given above are all referrible to the central ganglia of the spinal system.

The effect of conium upon the motor activity is more marked than upon the muscular strength. A full dose does not reduce the muscular power of the individual, but from free exercise he becomes tired and exhausted. Its action, however, differs in different persons. Those who lead an active life require larger doses, but its effect is readily perceived and more lasting. In cases of mania, muscular activity and endurance are present and prolonged to a remarkable degree; many persons apparently feeble will continue for weeks and months in a state of almost constant muscular activity, and rarely express weariness; these are particularly benefited by liberal doses of conium.

Harley claims to have demonstrated that it does not act directly on the brain.

It is said that "Socrates after swallowing the poisoned cup walked about for a short time, as he was directed by the executioner; when he felt a sense of heaviness in his limbs, he lay down on his back; his feet and legs first lost their sensibility, and became stiff and cold, and this stage gradually extended upwards to his heart when he died convulsed, his mind remaining clear and active up to the moment of his death." Whyte says of himself: "In a little more than half an hour after swallowing fifteen or twenty grains of the *extractum cicuta*, I have been affected with a weakness and dazzling of my eyes, together with a giddiness and debility of my whole body, especially of the muscles of my arms and legs, so that when I attempted to walk I was apt to stagger like a person who had drunk too much strong liquor." Dr. J. Chrifton Browne says, "conium soothes and mollifies the motor centres, especially when they are irritable and excited, and does not, as has been alleged, disastrously depress muscular activity; no weariness, weakness or oppression remains, and hence its great value in mania." Every physician appreciates the necessity of perfect rest in the treatment of disease, and especially is this so in mania and melancholia. The rest most desired is muscular relaxation; and conium acting directly upon the motor centres gives us this. The full action of conium induces sleep; it operates on the whole motor tract, just as opium does on the brain; it quiets and renovates the whole muscular system; at first it seems to paralyze, but it is indirectly a tonic, for its continued administration almost invariably results in an improved condition of the general health. Its effect is the counterpart of that of strychnia, in that it quiets and conserves nervous energy and leaves the muscles to sink into rest, while strychnia excites and produces long and powerful contractions of the muscles. The full physiological effect must be obtained in each instance or the most beneficial effect will not be secured. We have frequently observed the strong and powerful man in mania and melancholia, after taking a full dose, become quiet, and this state is very soon followed by prolonged sleep from which he awakes much refreshed. An eminent writer on conium says, "to give hemlock in doses that fail to produce an appreciable effect upon the motor system is to give

repeatedly the hundredth of a grain of morphine to one dying for want of sleep, or a grain of quinia to cure an ague fit." Sufficient having been said upon the action of conium we will now consider its value in certain nervous diseases.

We have given Squibb's fluid extract of conium in eleven cases of epilepsy of long standing, complicated with dementia; fits were lessened somewhat in number and in severity, though none were entirely relieved. We believe conium is of the highest value in this disease, while it can do no harm; under its long continued administration the general health of the patient improves, as it does not in any way interfere with digestion or any of the secretions.

In several cases of facial erysipelas with great restlessness, while bromide of potassium proved to be of little use, conium relieved pain, and sleep followed. In two cases the physiological effects were kept up during the acute stage, with the happiest results to patients. Prof. Mitchell, who has large experience in the treatment of erysipelas by conium, says, "the combination of blue mass with the extract of hemlock unites a desirable soothing influence with a favorable alterative agency. I have employed this combination with the two-fold intention named, in erysipelas that returned very frequently, affecting almost exclusively the face. By persisting in the use of pills containing one-half grain of the blue mass, with one grain of the extract for a few weeks, I have succeeded in so changing the diathesis as to lengthen the interval of attack from three weeks to six months, and at last to effect complete recovery."

A few cases of sciatica have received considerable relief by conium, and a number of cases of migraine dependent on dysmenorrhœa, were successfully treated by administering the succus conii a few days previous, continuing it through the menstrual period and a few days after. In these cases chloral hydrate gave only temporary and imperfect relief. In hysteria with epileptiform convulsions, conium given in full and repeated doses affords much benefit. By repeated doses we control the tendency to hysteria, though by this we do not mean to say hysteria is permanently and invariably cured. The following is a case in point: a young woman, aged 19, last spring had an attack of acute mania, which lasted for several months; she became nervous, irritable, of an excitable temper, complained of pain in the head and loins, which was followed by an epileptiform seizure of short duration. After the fit the patient remembered all that transpired, and with the exception of slight nausea, was in her usual condition, though nervous. She continued to have frequent hysterical convulsions of an epileptiform character. Succus conii was given in drachm doses four times a day and continued. Since that time she has had only two fits, which were very slight and her general health has very much improved. Her appetite is good and she sleeps well at night, and at time of writing has shown no tendency to hysteria for more than two months.

At the West Riding Lunatic Asylum, Dr. J. W. Burman has made

many valuable experiments with *conia* hypodermically administered.

He says :

After having injected my of this solution in my right arm, I went off immediately to play billiards ; there was considerable local smarting for a few seconds after the injection ; in fifteen minutes there was confusion of vision and slight weakness of the legs ; in twenty minutes there was some numbness and tingling of the arm as well, and the eyelids felt heavy ; in twenty-five minutes the weakness of the knees and legs was more marked, and there was a certain amount of unsteadiness in my gait, as I walked around the table ; in thirty-five minutes the numbness and weakness of both arms and legs were well marked, and I felt that I handled the cue awkwardly, and that when standing still there was a inclination to sway backwards and forwards, while the knees began to give way under me ; my voice was now rather thick, and I mumbled my words somewhat when speaking ; in forty-five minutes I was fast losing all interest in the game, and doubted whether I could go on with it, but I managed to do it by great effort ; there was now much confusion of vision, and the weakness of both arms and legs intensified ; I could not now walk without staggering ; in one hour and ten minutes I had finished the game of billiards and left for a walk ; my legs were stiff and awkward in motion, and it was just as much as I could do to get along ; I had to progress slowly ; there was a great feeling of calm tranquility and some slowness of mental processes, in fact all my movements were slow and labored ; I felt with regard to my limbs as if I was getting up to walk after a short rest at the end of a day's good pedestrianism, and altogether a quiet rest on the sofa would have been most acceptable to me. It was now only possible to get up stairs with the greatest effort, and I did so in a very awkward manner, and often knocked my toes against the steps ; but strange to say, I felt it more difficult to go *down* than *up*. When I sat down, I had to let myself suddenly down when within a few inches of the seat. As the sequel showed, the effects were now at about their maximum intensity ; but I continued to keep moving again. In an hour and thirty-five minutes vision was about right again and the effects were diminishing in intensity ; the feeling of calm and tranquility was still great. In two hours and twenty minutes the legs were nearly all right again, but the arms were still weak. Three hours after the injection I felt quite well again, and I sat down and ate a hearty dinner, feeling not the worst for the experiment on myself.

CONCLUSION.

We repeat to some extent a few of our remarks on the action of conium :

1. Muscular relaxation.
2. Duration in proportion to dose.
3. Physiological effect in proportion to purity of the article used.
4. The brain is not affected directly by conium.

5. Pulse and temperature both reduced after a full dose.
6. A gentle perspiration covers the whole body as soon as the physiological effects are observed.
7. No appreciable effect on any of the secretions.
8. Quietness lasts from two to four hours, and then disappears, leaving only a sense of lessened muscular energy.
9. Conium, not acting on the brain, may safely be given in all febrile diseases.
10. Conium, when applied to the skin, causes slight redness.

Dr. Burman gives the following conclusions from the hypodermic injection of conia:

1. Conia is too powerful and too irritant to be administered internally alone; but when neutralized with acid and in bland solution, there is no reason why it should not be used internally, in suitable doses, and thus produce well-marked cicutism without any topical irritation.

2. Pure conia may be injected under the skin, in large quantities, without leading to any result except the formation of an abscess, or the production of considerable local irritation at the site of injection.

3. Conia, neutralized with acetic or hydrochloric acid, and dissolved in spirit and water, acts very rapidly and powerfully, when subcutaneously injected, in pigeons, frogs, guinea-pigs, rabbits, dogs, and cats; and, when thus used in doses of from mss to mij, in the healthy human subject, it produces well marked cicutism.

4. Thus administered, it may be used therapeutically, in doses of from mss to mij, in cases of *mania*, with the result of subduing motor excitement, warding off emaciation and exhaustion, and promoting recovery. The strongest conia may be thus administered, commencing with doses of m₁₀th and gradually increasing, in proportion to the motor activity of the patient, until decided physiological effects are produced.

5. When thus administered, the use of conia does not lead to any disturbance of the digestive function, interference with the circulation, or any considerable local irritation.

6. The most suitable cases for treatment by the hypodermic injection of conia, neutralized and in solution, are those of *acute mania*, where the brain lesion is not *organic*, and where medicine, if given by the mouth, would require to be administered with the stomach pump.

7. Conia, acting upon the purely motor centers, in a sedative manner, and morphia acting in a similar way on the sensori-motor and ideo-motor centres, it follows, as a fair corollary, that the combination of the two, in subcutaneous injection, should lead to effects directly antagonistic to the condition of maniacal excitement; and such being, in fact, the case, they may be thus used together, with very great success in the treatment of cases of mania.

8. Conia might be very useful, as a subcutaneous injection, in cases of poisoning by strychnia, as well as in tetanus, hydrophobia, and other spasmodic diseases.

9. Specimens of conia, as obtained from *different* sources, vary very considerably in appearance and strength, and they may be rendered dangerous or unfit for use, in the human subject, on account of impurity. Too much caution can not, therefore, be observed in the first use of a new specimen, until its strength is ascertained.

10. Conia, as obtained from chemists in England and Scotland, is manufactured, for the most part, abroad. The best and purest conia is prepared from the *seeds* of the *uncultivated* plant, and, in order to avoid variability, all supplies of it should be drawn from some *one* good manufacturer, with directions that it should be so prepared.

11. An increased demand for conia is all the stimulus that is required to lead to the production of a crystallizable salt of it, of stable and uniform strength, and sufficiently soluble in water for the purposes of subcutaneous injection.

12. *mass* of the best conia (costing $\frac{1}{2}d.$) subcutaneously injected, neutralized and in solution, is equivalent in action to about fl oz j of the best *succus conii* (costing $2d.$), administered by the mouth.

CASE 1.—Man, age 28, married, carpenter, common education, uses tobacco and liquor; admitted to treatment in January, 1872. Patient was a large well built, powerful man, and had enjoyed good health till present attack. First symptoms of insanity were noticed early in 1871, when he became irritable and ugly to his wife, talked incoherently and constantly, developed rapidly delusions of wealth, had hesitancy in speech, spoke very indistinctly at times, had delusion that he was Governor of the State, and afterward the President. Hesitancy of speech, with muscular twitchings of the face increased. On seeing him he was found anemic and thin in flesh, excitable, spoke very slowly, and with difficulty; tongue tremulous, gait staggering, had delusions of great wealth, was coherent in speech; said he had slept very irregularly for some time previous, and then only under influence of morphia hypodermically administered. He became very much excited, was noisy and destructive, repeated over his delusions; was given *mixx* of fluid extract of conium without any apparent effect; in half an hour same quantity repeated; in an hour afterwards he was quiet, asked to lie down, and slept two hours; in the evening the same dose was repeated, and patient slept all night.

The following day he was much excited and incoherent; conium was now ordered in *mixx* doses four times a day. He had several parietic seizures after admission, and was somewhat disturbed at these times, but the greater part of the time was quiet. The medicine was continued for ninety days, and he improved much in general health. In this case the conium secured comfortable sleep, did not interfere with digestion, and kept the patient quiet during the day.

CASE 2.—Man, age 56, married, physician and dentist; has used liquor and tobacco to excess; native of New York; was first seen in January, 1872. Patient has enjoyed a lucrative practice for thirty years, and always had good health until 1865, when he had an attack of mania brought on by exposure and excessive drinking. From this

attack, which lasted about a month, he seemed to have fully recovered. He soon resumed his professional duties, and was apparently well until about three years ago when he became gloomy, neglected his duties, and was very absent-minded. This state continued, and in the latter part of 1871 he visited Europe, and consulted the most eminent physicians. For a time he seemed to improve, gained in flesh and strength, and his appetite was good. Soon after his return he became very melancholic; was suspicious of his family; talked of suicide, lost his regained flesh and strength; was wakeful, though anodynes of various kinds were administered. He was very pale and anæmic, thin, and looked haggard, feeble in mind, suspicious; said he was brought here to be killed; asked protection of the doctors, saying that his family would starve and go to the poor house; had not taken food for some days previous; was given milk punch and half a drachm fluid extract of conium the evening of admission. He slept all night and the following morning he was cheerful and said he felt much better. The conium was repeated in *mx* doses three times a day; patient complained, after each dose, of smarting over his eyes, and a dizziness and dragging sensation in limbs, so much so that he always wanted to lie down after taking his medicine. He continued quiet and slept well each night till February 5th, when he became disturbed, said he was going to have a movement from his bowels that would flood the room, and that his family were all around him on this account. A drachm of the fluid extract was now given at once; in twenty minutes he was quiet, and in half an hour was asleep. The medicine was then given as before, and patient has continued quiet and slept regularly since. It was stopped in August last, and in January the patient was discharged much improved.

CASE 3.—Man, aged 27, married, two children, tanner, uses tobacco and liquor; native of New York; paternal aunt insane. Patient was always in good health till seven weeks before seeing him, when he fell from a load of hay and injured his head; symptoms of insanity were at once developed; he became noisy and excited, was incoherent, had paroxysms of violence in which he became very destructive, and was in restraint a great portion of the time. We saw him in handcuffs, was talkative and incoherent; pupils widely dilated, face and hands congested, tongue moist, had not taken food for three days; had been under medical treatment since attack began, but medicine did not seem to have any appreciable effect. He was given a drachm of the extract of conium; was very noisy for an hour, when he suddenly became quiet and asked to lie down; he continued quiet for about four hours, when he had a severe paroxysm of noise; was now put on *mx* doses four times a day; was more or less disturbed for a week or ten days, when he became quiet and seemed to realize his condition; from this time began to walk out and rapidly improved; conium was continued at night for two months; after three months he recovered. In this case marked quietness followed the administration of each dose, and the diminution of motor excitement was gradual.

CASE 4.—Man, age 21, single, farmer, uses tobacco; native of New York; no hereditary tendency to insanity; came under notice January, 1872. Patient was a large muscular man, and had enjoyed unusually good health till June, 1871; while working in harvest field had partial sunstroke from which he rallied and seemed to recover in about four weeks. In August following, symptoms of insanity were developed; complained of intense pain in his head, was unable to do any work; following this he became gloomy and despondent, was seclusive, refused to go to the table with the family, would not see his friends, was wakeful and restless, frequently sitting up almost all night. On admission was thin in flesh, complexion sallow, pupils dilated, tongue coated, bowels constipated. Was put on bromide potassium at night in doses of twenty grains; this was continued for two weeks, patient sleeping only a part of each night, and looking more haggard; bromide was stopped and fluid extract conium was given in mxx doses at night; sleep followed and he began to improve, became more cheerful, talked freely of his condition and of the effect the medicine was having on him. Conium was continued till recovered in April, 1872. Patient gained 20 pounds.

CASE 5.—Man, age 57, married, farmer, seven children, common education, native of New York; first seen, February, 1872. Patient was of feeble constitution but actively engaged in business, and had periods of exhilaration and depression. About twenty years ago he had an attack of melancholia, from which he recovered, but since that time has had a number of marked periods of depression. For six months previous to treatment he was melancholic, suspicious of his wife and family, thought they were plotting to kill him, and expressed other delusions of a depressing nature; on admission, was very much emaciated, anemic, pulse feeble, pupils dilated, eyes injected, voice tremulous, and bowels constipated. For two days following was gloomy, ate very little and was up about his room most of the night; the day afterwards, being the third, he was put on fluid extract conium m xx three times a day; he enjoyed a refreshing sleep each night and expressed himself satisfied to remain, "If I can only sleep and get rest." March 28, has slept well every night since conium was given; gained in flesh, dropped delusions and seems to realize his condition. In May he recovered; patient's friends say he is in better health than at any time for the past twenty years.

CASE 6.—Man, age 61, married, thirteen children; laborer; uses tobacco and liquor to excess; native of Ireland; first seen in November, 1871. Usually enjoyed good health, and was always able to do his day's work on the railroad. Six months previous, had been drinking, and lost flesh and sleep; about three weeks previous, became manical and violent, had to be restrained and taken to jail to prevent him from killing his family; while there he was destructive, violent abusive and obscene. On seeing him, he was thin in flesh, pulse small and frequent, noisy and incoherent, hoarse from constant hallooing; was put on chloral and hyoscyamus at night, which was

continued for a few days, but he slept irregularly, and about December 1st, became more disturbed. Conium was substituted, mxx four times a day, and after a few doses, he became quiet and slept well. The medicine was continued at night till March, 1872, when he was in a comfortable condition for some time; he however, began drinking as soon as he reached home. After remaining a week, he became as acutely manical as on former occasion, was given conium at once, which was continued for a week, when he became quiet and slept well, appetite slowly improved, and he gained in strength. Is at present time about well.

CASE 7.—Woman, age 37, married, seven children, housekeeper, common education, uses snuff, native of New York; two sisters have been insane; first seen March, 1872. Patient had always been in delicate health, but was able to be up and about the house. Twelve years ago, after the birth of a child, she had an attack of mania, which lasted about six weeks. She recovered from this attack and was in her usual health until about three weeks before we saw her, when she again became insane; had been sitting up at night with a sick mother and became thoroughly exhausted, lost flesh and strength, appetite failed, and was noisy and destructive at home. On first seeing her was very incoherent and talkative, and had to be in restraint; was ordered hyoscyamus and chloral, but during its continuance was as noisy as before. Bromide potassium was now substituted with like results. In August, there had been no improvement, either mentally or physically, and she was very thin in flesh, and anæmic. Succus conii in drachm doses four times a day was now substituted; the effect was appreciable at once; she became quiet, slept well at night, was coherent in conversation, with a fair appreciation of her condition. During the month of August same dose was continued, but in September it was reduced to a drachm each night. This is still continued, and at the present time she is improving both mentally and physically.

CASE 8.—Woman, age 46, married, two children, housekeeper, common education, good habits, native of England; great-grandmother and great-grandfather were insane; treated in April, 1872.

She was in fair health until about eighteen years ago, when she was delivered of her first child; *proclivitas uteri* followed and continues; has been taking medicine constantly since that time; about a year before seeing her symptoms of insanity were first noticed. She had hallucinations of sight, that people were in her room at night; said they were talking about her, and laughing at her, and complained that her husband was laying plans to kill her. This was soon followed by a paroxysm of maniacal violence which continued for some days, after which she was gloomy and melancholic. These paroxysms came on at irregular intervals for the past year, and at times were so severe that the patient had to be restrained; she was restless and slept very little, lost flesh and appetite. She was thin in flesh, face flushed, pulse rapid, was irritable and excited, very abusive to her husband

and those who accompanied her. She was put on *succus conii* at once, and slept a portion of the night. The following morning she was noisy, destructive and incoherent. Two drachms were given and as soon as the physiological effects were observed, which was in half an hour, she became quiet and asked to go to bed; was kept under its influence for a few days, when the dose was lessened to one drachm three times a day. The medicine was continued for thirty days, during which time she had no return of the paroxysm. Her appetite increased; she slept well, improved very much in general health, and in September recovered.

CASE 9. Woman, age 37, married, two children, housekeeper, common education, good habits, two paternal cousins insane; first seen in August, 1872. Patient had enjoyed fair health till about two years ago. At this time, while traveling, she became tired and exhausted, and had uterine hemorrhage, after which she gave birth to a still-born child. She became much depressed afterwards, and, unfortunately, fell into the hands of irregular practitioners, and soon developed delusions of a depressing nature. About two months before we saw her, was treated by a distinguished physician for ulceration of the *cervix uteri*, and was relieved. During this time she developed the delusion that she was called to preach; neglected her habits, became careless; on one occasion went from the sick bed to a house of prostitution to warn the inmates to repent; prayed constantly, lost in flesh, and large doses of hypnotics failed to procure sleep or quietness for even a short time. We found her in a state of frenzy; very much excited all the afternoon; thin in flesh and anæmic; labored under delusion that a serpent controlled her actions, and thought it was the devil; said she was afraid it would impregnate her; would run across the room, frightened, saying she saw the serpent. At 8 P. M., on the same night, was given a drachm of the *succus conii*; in about half an hour she was perfectly quiet, and perspiring freely; slept four hours during the night. She continued in an excited condition for about two days, when she became quiet and slept well every night; appetite began to improve. The medicine was given for thirty nights, when it was discontinued. Although the patient retained delusions, she became quiet and comfortable, and improved so much in general health, that she has since recovered.

CASE 10.—Man, aged 34, single, clerk, common education, chews tobacco, and has used liquor moderately, but none of late; treated in March, 1872. Patient was always in delicate health; about three years before had an attack of acute bronchitis which lasted four weeks, after which he became gloomy, depressed, and secluded himself; lost all interest in his business, and for a year after, remained idle. In fall of 1870 began to work again, but was not in a condition to do so. In January, 1871, had a convulsion, and was unconscious for two days; after this, grew worse, talked of suicide, but never made an actual attempt. From this time was gloomy and depressed, lost in flesh, wakeful and restless at night; took chloral in large doses, and for a

time slept well, but its effect was soon lost upon him. When first seen, was thin in flesh, anæmic, bowels constipated, tongue coated with a white fur, eyes injected, skin sallow, pulse small and wavy; temperature normal. He was not given anodynes for two days, took little food, and did not rest well. Conium was ordered in *mxx* doses, three times a day, and a tonic was also given. In April he had gained twenty-five pounds in flesh, and had slept well nearly every night since the medicine was commenced; at times he is very much depressed, though he says he has not felt better for some years. Appetite has increased so that he now does without the tonic, and eats regularly. In July conium was stopped and in August, he was well.

CASE 11.—Woman, aged 21, married, one child, good habits, native of Connecticut; academic education; seen in June, 1872. Patient was a delicate and nervous woman; at the age of thirteen began to complain of pain in her head; at sixteen had an attack of mania which lasted about three months, and at eighteen was married. On the evening of her marriage she again became insane and was taken to an asylum where she remained five months, and was discharged recovered. After this she went to Germany where she remained two years, and there gave birth to her only child; had a natural labor and suffered no mental trouble. On her arrival home she at once showed signs of mental disturbance; was excited and talkative; was kept quiet and alone for a few days when she was herself again and continued in fair health till date of present attack, in June last. Then she became violent, noisy, destructive, abusive and very obscene; was brought to our notice in this condition, thin in flesh and anæmic, pulse small, pupils widely dilated; breath foul, bowels constipated; was at once given hyoseyamus and chloral and put on tonic treatment. This was continued till the 1st of August, when she was put on fluid extract conium in *mxl* doses. She continued maniacal for a few nights, then became quiet, but was incoherent and very talkative. After this she was very comfortable, and slept without aid of sedatives till September 1st, when she again had a paroxysm of noise and had to be restrained. She was now put on *succus conii* in drachm doses every night at bed time, and in three days became quiet and began to improve. The medicine was given at irregular intervals, and regulated according to her desire for sleep, and she steadily improved in both mental and physical health and recovered November, 1872; at date of present writing, patient says she never enjoyed better health.

CASE 12.—Man, age 27, married, two children, engraver; uses tobacco and liquor to excess; no hereditary tendency to insanity; first examined April, 1872. Patient has practiced self-abuse since the age of fourteen; at twenty-one was married, and discontinued the practice for a few months, but began again; had gonorrhœa a number of times, but no other venereal trouble. For a year previous had been drinking to excess and frequently visiting houses of prostitution. In January, 1872, developed first symptoms of insanity; began to neglect his business; made mistakes in his work and was careless. His

employer attributed it to excessive drinking, as five gallons of alcohol were missing from the store and he acknowledged that he had drunk it. A change in his speech was at first noticed, a thickness, with difficulty in articulation; called on his friends and had no recollection the day after of having done so; walked fifteen miles and informed a family that he came all that distance to remain over night and that no other house could accommodate him; was gloomy and depressed and made an attempt to cut his throat with a pen knife. We found he had considerable difficulty in speech; talked slowly and with great care, muscles of right cheek slightly contracted, and sensation somewhat less than on the left side. His tongue was very tremulous and inclined to right side, but there was no history of a paralytic attack. The pupils were largely dilated, skin sallow, pulse small; no marked delusions; had been more or less wakeful for a month past and taken largely of anodynes, especially chloral; looks haggard, which he says is from want of sleep. For the first week was very much depressed and despondent, always asking if he would get well, and insisting that he had softening of the brain; had great tremulousness of hands and tongue, and disturbance of speech, but no delusions; given tonic with conium at night. June 25, no marked mental change; to-day had an eruption of semi-confluent small pox; was given bromide potassium and conium alternately and kept quiet. He slept well, made a good recovery from the attack, and improved rapidly, and in August had completely recovered.

Camomile Indica.—This drug has many of the good qualities, but also the same objections as opium. It is, however, more anti-spasmodic, and therefore useful as an adjuvant to other remedies particularly the Bromide of Potassium, in all cases of insanity complicated with spasms, as Epilepsy, some kinds of Hysteria, convulsive twitches, &c.

Beladonna.—This medicine has fallen into disuse in hospitals for the insane, on account of its powerful and dangerous action in large doses. Most excellent effects are sometimes obtained in cases of insanity with neuralgia and rheumatic pains. Occasional benefits in Epileptic Insanity are recorded, also when chorea is associated with mental symptoms.

Hyoscyamus.—This drug excites the circulation like opium at the beginning, but does not constipate, it relaxes the bowels. It subdues nervous and spasmodic action without being so powerful and dangerous. It produces sleep like conium, but not with that certainty and permanency of action. It is therefore given to patients with great nervousness, in hysteria, spasmodic asthma, particularly when, with its other effects, a laxative influence is to be exercised.

Dacumara.—This is too feeble as a narcotic to be given for the same purpose, but is a very useful constitutional remedy in Insanity where these disagreeable dry and scaly skin eruptions form an associating symptom, particularly when further combined with chronic rheumatism.

Hydrate of Chloral.—The effect of this drug is that of a complete and effective narcotic, without subsequently producing headache and a sick stomach. Its action upon the circulation is to reduce the pulse in frequency and after a time also in force, although at first, the heart's action is increased in strength. Its great advantages are that it does not lose its effect by repetition and the dose need therefore not be increased, it does not constipate, it has no influence on se—or excretions, and the hypnotic influence is that of natural sleep. Its great value as a sleep producing and quieting agent is highly praised and cannot be disputed. With all these good qualities it has, however, been found that it does not seem to have any curative power, in short, that the patient's mind after ever so many refreshing sleeps seems to awaken in the state it was before. If its further use, (for it is comparatively a new remedy) should corroborate the above statement, the use of it would be but a substitute for a canisole. In other words, it is a good temporal remedy and of service as such in cases of acute mania, in the periodic attacks of chronic mania or those of Dementia. It is also said to prevent the violent mania after an epileptic fit is over. As the constant use of it seems to have a depressing effect, it may be combined with some alcoholic stimulant, or a stimulating narcotic. Its dose is from 15 grs. to 1 dr.

Bromide of Potassium.—In some respects this remedy is similar to chloral, although it is not as surely hypnotic, but on the other hand a very valuable nervous sedative. Unlike chloral, it has decided curative qualities. The greatest inconvenience of its use for a long time is the debilitating influence it has on the system. Therefore, it ought like chloral to be given in combination with tonics and nervous stimulants. The greatest good obtained from it, is certainly its tendency to diminish the force and frequency of attacks in the Epileptic Insane.

It is also efficacious in Hysterie Insanity, climacteric derangements during puberty, and in cases of Satyriasis and Delirium Tremens. It has accumulative influences, and as soon as digestion becomes deranged by its use, which can be seen by the tongue becoming white, it should be discontinued. Its combination with iron has been highly praised in chronic cases of insanity with muscular activity, also together with cannabis indica in Hysterie Spasms.

The other narcotics and nervines are seldom used in Insanity, and should when employed, be given in reference to their physiological action and their consequent indications.

Ergot, we have used with considerable success.

The different preparations used, were the fluid extract prepared by Squibb, and the aqueous extract, or ergotine, made by Merck, of Vienna. The dose of the former is from one to two drachms; the latter from six to ten grains. One drachm of the alcoholic extract of Squibb's preparation is equal to about six grains of the ergotine. We have also used a solid extract, made by Squibb, which is about equal in strength to imported ergotine.

We have taken a number of pulse traces, noting the increase in frequency of the beats. The temperature has been recorded with no marked change. The full physiological effect of ergot will last from one-half to three-quarters of an hour.

Our certain knowledge of drugs is limited; comparatively little is known of the true *modus operandi* of this one, though it has been in use for centuries. We present a few thoughts, hoping they may be of use to the busy practitioner; some may not be wholly original, while a new theory may be advanced, which will cause thought to the careful observer. Until within a recent period, ergot was mainly used in obstetric practice, but with increased scientific knowledge, it has been successfully applied in various conditions of disease. Ergot is admitted, by the best observers, to act directly upon unstriated muscular fibre; thus it is that ergot produces its peculiar effect on the uterus, the unstriated fibres of the bladder, the muscular layers of the intestines, and especially upon the muscular coats of the blood-vessels. Its action upon the heart is not doubted, although it is not composed of unstriated fibre. Ergotine may act in two ways: First, directly on muscular fibre, in the same way as any other stimulant; Second, through the nervous system, principally the ganglionic. The immediate effect of ergotine on the blood-vessels is marked and rapid, the pulse is increased in force and volume; the slow and wavering pulse becomes full and strong. This can be further ascertained by injecting ergotine into the bat or frog, first observing the circulation in the wing of the bat, and web of the frog's foot; before the injection the circulation is slow; the vessels are tortuous; in a few seconds afterwards the circulation is increased, and there are visible contractions of the vessels; in about ten minutes the vessels assume the condition in which they remain till the effect has passed off.

The power of ergotine is manifest, from its value as a hæmostatic, in reducing the size of blood vessels. Jacobi, who has used it in fevers, says: "Many cases of obstinate, intermittent fever will, when no longer benefited by quinine and arsenic, yield to ergotine." It is highly recommended in infantile paralysis, dependent upon congestion of the cord; that is, dilatation of the blood vessels, and usually with hæmorrhage taking place in the vertebral canal. In chorea, or St. Vitus' dance with a congestion of the spinal cord, marked by intense pain, its use is unquestionable, and our experience only goes to show the correctness of many other observers. The reason, I suppose, why Ergot has not been more generally used, was due largely to the old idea, that it produced gangrene of the limbs, the features of which are represented by coldness, rigidity, anæsthesia and sphacelus of those parts which suffer from it. This idea, we think we may safely call it an idea is gradually losing ground. The symptoms of cerebral anæmia quite correspond with ergotism, namely: giddiness, dimness of vision, insensibility, tremor, paralysis and coma. Donders has proved that contraction of the vessels of the *pia mater* is caused by irritation of the sympathetic nerves of the neck. It is though

this power of producing contractibility that ergotine appears to act, not only as a poison, but as a curative agent. Its action is as well marked in health as in disease. It is claimed that where ergotine is injected in a vein, paralysis of the heart follows; when taken internally, in the form of alcoholic extract, it often causes colic. This can be readily obviated by combining it with conium. After all that has been said, some no doubt will claim that it resolves itself into a state of congestion, no matter what the disease is, and that unless there is an increased amount of blood, or a congested state, there is no use of giving ergotine. I suppose there are no two similar cases of cerebral hyperæmia; at least, having seen a large number of post mortem examinations of acute mania, with congestion, no two were in all respects alike. Taking the cases of insanity in which Dr. Browne has used Ergot, we have confusion of thought, melancholy, headache, &c., but the difference in the symptoms of the various cases, does not constitute any ground for believing they are not all referable to a determination of blood to the head, as in each we have a throbbing of the arteries, often suffusion of the eyes, and headache. The suddenness of the paroxysms in insanity, and the rapidity with which they subside, would seem to indicate that there is congestion, though frequent attacks may ultimately produce organic changes. In cases of excitement or shock, whether it be in the form of mania or not, there often is dilatation of the cerebral blood vessels, caused by a rush of blood to the head; these are proper cases for the use of ergotine. We owe most of our definite knowledge of the effects of ergotine on the nervous system to Brown-Sequard. He used it largely in most all diseases of the nervous system. In paraplegia and myelitis we have a congestion of the spinal cord and meninges; in these cases he has found most beneficial results. Brown-Sequard says, (we condense his statements,) experiments upon animals have shown me, in the most positive manner, that Ergot and Belladonna are powerful excitants of unstriated muscular fibres, blood vessels, &c.; both dilate the pupil, but each of them has more power in certain parts than the other; so we find Belladonna acting more than ergot on the blood vessels of the iris, (which is the principal cause of dilatation of the pupil;) on the blood vessels of the breast, (which is the cause of the cessation of the secretion of milk;) on the sphincter of the bladder, (which is the cause of its success in cases of nocturnal incontinence of urine.) On the contrary, we find Ergot acts more than Belladonna on the muscular fibres of the womb, and on the blood vessels of the cord, &c. The same author says, he has seen the diminution in the calibre of the blood vessels of the *pia mater* of the spinal cord, taking place in dogs after they had taken large doses of Ergot. He also observes that the reflex power of the spinal cord becomes very much diminished under the influence of this drug, which in so doing, acts just in the opposite way to that of strychnia.

Taking what Brown-Sequard has said, and our own experiments, we are able to say positively that ergotine reduces the calibre of

blood vessels, whether it be in paraplegia, with congestion, or in simple congestion of the cord uncomplicated. We know of no medicine so appropriate or likely to do so much good as ergotine administered in large doses three times a day. In cases of acute congestion and meningitis, with intense pain and heat, due to the distention of the blood vessels, with a sense of fullness and throbbing, the patients complaining that their heads would burst, ergotine has been administered and continued during the acute stage. In a few instances the delirium lasted but a few hours, these symptoms subsided, and the patients made a good recovery. In these cases we gave ergotine, from six to twelve grains daily, in divided doses of three grains each, and continued for about a week. From Brown-Sequard's observations we notice he has given it in much smaller doses with very beneficial results. In chronic meningitis, with chronic insanity, where there are acute paroxysms, there is almost constantly intense pain and headache, and often soreness, on pressure, over the spinal cord and medulla oblongata. In congestion of the spinal cord, as well as in the meninges (which is a very common disease among women, chiefly on account of the greater number of inductive causes,) it is wonderful to see the rapidity of its action, and the amount of actual good obtained from its early and judicious use; if given at the commencement of the disease, we may entertain strong hopes for an ultimate favorable result.

In neuralgia, Dr. Woakes was among the first to use ergotine. He says in his pointed way of explanation, that regarding shingles as more or less illustrative of all forms of neuralgia, he referred the rash, and pain in it, to the same cause, viz.: effusion of *liquor sanguinis* from the ultimate branches of the artery, in the track in which the symptoms appear. Tracing this artery to the skin in one direction the effusion from a papillary arterial twig was seen to occasion a spot of herpes upon the cuticular surface of the papilla; tracing it in the direction of the corresponding sentient nerve, the fluid effused from the nutrient twigs (*vasa nutritiva*) supplying it, was found to occasion by its mechanical disturbance of the sentient fibrillæ the severe pain constituting the associated neuralgia. The cause of the effusion in such cases was referred to a temporary suspension of the regulating influence exercised over the minute arteries, by the sympathetic nerve fibres distributed to them. It was this suspended function that the ergotine was supposed to restore and so to allow of the removal of the fluid from its pain-causing situation. He reports five cases: one of severe neuralgia following shingles; one of sciatica of four months' duration; one of hemicrania, and two of ordinary tic douloureux. In all these cases, he says, "cure resulted in from four to six days after the commencement of ergotine."

Dr. Browne, who has an extended experience of over six years with the use of Ergot in the treatment of insanity, has found it useful in: 1. Recurrent mania. 2. Chronic mania, with lucid intervals. 3. Epileptic mania. He has found it almost uniformly efficacious in

reducing excitement, in shortening attacks, in widening the intervals between them, and occasionally, in altogether preventing their recurrence. Dr. Krowne fortifies his arguments by presenting a number of cases, in which its success cannot be doubted.

There is probably no condition so annoying to the patient as headache, and certainly it is the most common. In the following forms we have used ergotine with much benefit and comfort to the patient.

1. Headache, depending on plethora or fullness of blood.
2. Headache from anæmia.
3. Headaches, depending on changes in brain substance and the membrane.
4. Epileptic headaches.
5. Migraine.
6. Headache, depending on disordered menstruation.

The most common form of headache is the first, or that depending on a plethoric condition of the blood-vessels of the brain. Of course we can not estimate correctly, the amount of pain endured at each sickness, but it depends largely upon the constitutional character and nervous susceptibility of the patient. In plethoric headaches the course is either very short, (a few hours at most,) or they last for some days; the pain is usually referable to the back of the head, and there is much throbbing of the temporal arteries. In this class of headaches we have used ergotine largely; about one hundred patients have been prescribed for, and in almost every instance relief was given in less than half an hour, and the attack thoroughly cut short.

In headache from an anæmic condition of the brain, the blood-vessels are usually lax, and as a consequence, there is a slowness of the circulation. Ergotine contracts the blood-vessels, thereby giving tone to the arterial system; the blood is forced more quickly and regularly through the brain, and of course in greater quantity.

Our cases of cerebral anæmia are comparatively few, and experiments are, therefore, limited, yet in those cases where we have had an opportunity of using it, happy results have followed.

In epileptic headaches, and in epilepsy, we have used ergot largely. In *petit mal*, there are muscular twitchings, congestion of the face, suffusion of the eyes, and a rush of blood to the head. We have in many of these cases been able to ward off *grand mal*, by large doses of ergotine. We have often combined it with conium, and it seems in this combination to work even more satisfactorily than alone, which is chiefly due, we suppose, to the sedative effect of the conium.

In migraine, or sick headache, we have distended blood-vessels pressing on the opthalmic division of the fifth nerve, thereby causing the pain; and if we accept this theory, then ergotine, by contracting the blood-vessels, will relieve the headache.

In headaches depending upon some disordered condition of menstruation, we usually have a fullness or congestion of the cerebral vessels; sometimes, however, it may occur from anæmia of the brain. In both forms the use of ergotine is beneficial. We present the fol-

lowing case, as being one full of interest, and showing in the most positive manner, the good result obtained from ergotine.

Man, age twenty-six, of full plethoric habit. For about ten years previously, has had periodic attacks of headache, coming on in the afternoon of each day, about three o'clock, and lasting for about an hour or two. He described the pain as beginning in the frontal region, and rapidly extending to the occipital; the throbbing of the temporal arteries were both marked and prominent; almost all known remedies were tried, with only temporary relief. About four months ago, while suffering one of these intense paroxysms of pain, was given three grains of ergotine; in a very short time the pain was very much lessened. The day following had another attack, and this time took six grains; in less than twenty minutes all pain had subsided, and the patient said he felt much better than he did before he had any symptoms of the attack. From that time until the present, has continued to take two grains of ergotine, with one grain of quinine before each meal. Our patient assures us that he has not had a return of the headache since the ergotine treatment was begun, and that his mind is more active, and his general health better than at any time in years past.

We have a large number of similar cases, in which similar beneficial result was obtained. We give a few conclusions arrived at; many more might be presented, but we give only the more important.

1. Benefit of combination with bromide of potassium in epilepsy.
2. It is apt to produce cramps and pain in the stomach, which is remedied by combination with conium.
3. In nervous diseases it soothes all renal irritation and catarrh of the bladder.
4. It dilates the pupil sufficiently to be noticed.
5. Increases both frequency and tension of the pulse.
6. Has no appreciable effect on the heat of the body.
7. In large doses it produces the same effect as conium, by inducing sleep.
8. Its beneficial action in delirium tremens, after bromide of potassium has failed.
9. It combines readily in form of pill, with sulphate of quinine.
10. It is a cerebral sedative.
11. Ergotine possesses an advantage over the alcoholic extract, in not producing any pain or cramp in the stomach, and is given in less quantity.
12. Ergot is not likely to be adulterated, and we always secure an appreciable effect after its administration.

Not only nervous sedatives are of greatest advantage in insanity, but also *Arterial Sedatives* have been of service, particularly such as diminish the action of the heart.

Digitalis and *Aconite* are the most frequently used drugs in that line; occasionally *Veratrum viride*.

Digitalis.—Where heart disease increases the force and frequency

of the pulse this drug has done good service in insanity, particularly Melancholia, but its action has only a palliative effect.

Unfortunately the effect of *Digitalis* is also dangerous, being accumulative. When the pulse comes to be intermittent it should be stopped or alternated for a week or two with *Aconite* for and with the same object. *Aconite* is also useful in rheumatic attacks, particularly of the heart. All cases of delirium of malarial origin can have *Veratrum viride* as an arterial sedative given in conjunction with some other well indicated medicine.

It is now considered to be a rule that *depletion* should be avoided as much as possible in insanity.

Bleeding has therefore become obsolete, and *Tartar emetic*, at one time so much praised, has fallen almost entirely into disuse, being only occasionally given in small doses as an alterative.

Mercury, particularly Calomel, unless the latter be given to correct bilious attacks of the digestive organs, has also fallen into malfavor. In chronic cases of mania, with sores and pains, the consequence of a venereal taint, I have seen the biniodide of Mercury do good.

Counter irritation is at present not much resorted to. Dr. Bucknill believes Croton Oil as a derivative upon the scalp of patients, where the acute passes into chronic mania, to be very useful.

Of the *stimulants* and *tonics*, "*Cinchona*" and its alkaloid, "*Sulphate of Quinia*," among the metallic, iron are the principal. The quinine is in England and France often given in combination with wine or some other alcoholic stimulant. In the United States the fermented liquors are frequently given to debilitated patients.

The syrup of Iodide of Iron to those affected with tuberculosis has given much relief.

Baths.—Tepid and warm, when administered for one to three hours, have a sedative influence and often allay excitement. Sometimes a short, cool shower bath followed immediately by a warm one is efficient. Sleep is often produced by the administration of a bath, particularly when mustard is added so as to produce a slight glow upon the skin. *Electricity* is occasionally very useful in hemi or paraplegia.

Other drugs can be and are used, the liberty of dispensing medicines allowing it. Those mentioned are the ones most frequently administered, and others not mentioned, when well indicated for special cases can often be usefully combined with the well known sedatives.

Before closing allow me to draw your attention to the necessity of well examining your patient at the commencement of the disease, because in that stage you have to use the greatest care in the selection of a remedy; further, in cases of Insane Diathesis your keen discriminating judgment in the selection of the proper and best adapted remedy may by its *Prophylactic* influence save a being from the greatest affliction humanity is heir to.

HYSTERIA,

PHYSIOLOGICALLY, PATHOLOGICALLY AND PSYCHOLOGICALLY CONSIDERED.



LECTURE NUMBER SEVEN.

To-day we come to another subject, not directly related to Insanity, yet very closely allied to it; by this I mean *Hysteria*.

We all believe in an occasional stirring up of a stagnant medical puddle, if it were for no other purpose than to produce sufficient malarial poison to arouse the dormant interparoxysmal ague of finding out how little we know. Uncomfortable as the ailing may be, and its relief, not to say a cure, a bitter draught, we must endure it for our own good, to prevent a chronic state of inertia. The worst part of the transaction is, that the stirrer up not only suffers thereby doubly, that is: finds out his own ignorance in the morning, but is also annoyed to see that others have found out the same thing in the evening, and he must therefore swallow the largest and bitterest dose.

The subject of *Hysteria* is turbid and therefore difficult to look through, and by stirring it the turbidity may increase, but as we are born to suffer, we shall undertake the work, no matter with what success, believing that ultimate good will ensue from the treatment we shall receive.

The name *Hysteria* cannot be said to signify anything, either derivatively or objectively, and we agree with, and shall therefore quote Dr. J. R. Reynolds by stating "The employment of the word 'hysterical' may sometimes be found indicative of the state of mind of the practitioner rather than that of the patient's health." It simply conveys a doubt as to what is the matter, but expresses a prevailing conviction, that it is nothing very serious as to life,—"The most celebrated of our authors on pathology agree upon the presence of hyperaesthesia and sometimes dysaesthesia. But of what portion of the cerebro-spinal nervous system? Even Dr. Niemeyer insists upon the phenomena of peripheral and central hyperaesthesia being contradictory to the supposition that the irritability is confined to either. He says that hyperaesthesia of the peripheral nerve is contradicted, "by the wide spread character of that excessive irritability as well as by the simultaneous derangement of the psychical functions." Again he states: "that an exalted excitability of those portions of the brain, whence consciousness of impressions is derived, is contradicted by the intensity of the reflex actions which accompany the hyperaesthesia." Taking these assertions in the sense of argument, we must

differ. Dr. Niemeyer must certainly have met with cases where impressions upon the peripheral nerves have produced the most profound impressions upon the mind, or where a comparatively slight moral impression or an emotion resulted in convulsions. We do not wish to define our view on either peripheral or central hyperaesthesia at this point of the argument, but simply object to such reasons. By it the ladder of successive and independent powers of reflex action of the various nerve centres, (and which is so admirably laid down by Dr. Carpenter in his work on Physiology of man) is also overthrown. By it the arduous and conclusive experiments of Physiologists such as Magendie, Longet, Claude Bernard, Flourens, Vulpian, Fritch, Hitzig, Pfleger, Schiff, Flint, Dalton and many others are completely ignored.—It is not well for medical science that Pathologists try to contradict in their visions practically established physiological facts. We can heartily thank Dr. Austin Flint, Jr., for his successful effort to demonstrate a case of that kind, when he flung aside by scientific analysis the 93 pathological cases collected by Andral, which were constantly held up as an evidence against the proclamation of physiologists, that the cerebellum presides over equilibration and co-ordination of the muscular movements, (vide Flint's Physiology Vol. IV. pp. 373-378). In a time of scientific progress we must not take bare statements, no matter whence they come.

We would like it understood, that by arguing on the cited paragraph of Dr. Niemeyer, we do not undervalue this eminent man; on the contrary, none have a higher opinion of his qualifications and genius, as a pathologist, physician and clinical teacher, than ourselves. Exactly for this reason have we taken his assertion as an example of the general disposition of pathologists to overlook physiological truths.

And what has all this led to in regard to the theme under consideration? Let us look into the most renowned works on the practice of medicine or monographs on Hysteria, and the authors are found to have accepted, with or without acknowledgement, *Hasse's* definition, namely, that, "Hysteria springs from a nutritive derangement of the nervous system, both central and peripheral." Now is there anything in this which would throw any light whatever on the subject, or which would be a clue to the causes, effects or treatment of the disease? It is only repeating what was quoted in the beginning of this lecture as explanation for the name, *i. e.* "it simply conveys a doubt as to what is the matter." Therefore the name *hysteria* is known as a definite disease, and to exist as such, yet its adverb hysterical, is constantly used without any aim, as a condition of mind and body which want of knowledge prevents us to classify scientifically. In other words, we know that such a disease is recorded, because we meet with it daily, but we do not know it ever to have been explained.

The definition of Hysteria being, therefore, "a doubt what is the matter," we will endeavor in these few pages, to make a beginning in clearing that matter up, by moving away the rubbish, and if possible,

to lay a temporary corner-stone, which, if found strong enough to build upon, may become a substantial building; if not, we will be the first to stoop and take it away.

The little we *know* of the physiological functions of the nervous system, must be the ground upon which we can build. What is not known to be a fact, but only surmised, can only be used for decorating the edifice. What is inconsistent with physiological truths, must be thrown away as refuse material.

No animal is perfect without an organization. The higher the grade of that animal the higher its organization; and the higher the organization the more a necessity for a nervous system. Man being the highest of animal organizations has the most complete and also most complex nervous organs. The function of these nervous organs or system is to hold communication between the other organs of man among themselves, and also to hold communication between his organs and the outer world. It receives impressions from without and expresses them within the man; it receives impressions from within and expresses them without. The character of these intercommunications is so varied as to require a variety of offices where to digest them, and because their variety embraces subjects of higher and lower grades the offices must be classified into corresponding degrees. The nervous system for communication with the outer world consists therefore of nerve fibres, called afferent nerves, which transmit an outward impression to the nerve centres, and of nerve fibres, called efferent nerves, which transmit it from these centres to the outer world by acting upon other organs so as to make them the expressive agents. We have, therefore, afferent and efferent nerves, the former transmitting what is felt, called sensory, the latter transmitting the stimulus of response, which is generally executed in motions, and therefore called motor nerves. We would like to draw attention to the circumstance that here the word *receiving* impressions has been purposely avoided so as not to mislead. An impression is only *received* at the centre, not the periphery. The peripheric end is only the medium where the transmission of impression begins, and if that impression is not received at the centre, for instance, by the nerve fibre being divided, no response of expression thereto will be noticed. From this initiatory physiological truth we learn already a mistake so frequently committed and the removal of which is a long step towards clearing the rubbish. We read constantly of a hyperæsthesia of the nerves. How can this be if an impression cannot be felt until it reached the point where it is received, the nerve centre? Now, compare this physiological truth with the quotation from Dr. Niemeyer's work, that in Hysteria "*hyperæsthesia of the peripheral nerves* is contradicted by the *wide spread character* of that excessive irritability as well as by the simultaneous derangement of the psychical functions." Now, it appears clear to us that when hyperæsthesia is *wide spread*, as he calls it, and when we know that the nerve fibres are not sensitive themselves and no such thing as hyperæsthesia of nerve fibres exists,

the *hyperaesthesia must be in the nerve centres*, and when *wide spread*, must involve all that part of the centre to which the sensory nerves which are so wide spread concentrate. When we admit that a lesion, say a degeneration of nerve fibres, will impede the transmission of an impression to a centre, we cannot thereby also admit that such a nerve fibre can be in a supersanitary state to transmit *more* than the impress, whatever it may be. A window pane cannot transmit more light than what is outside of it, no matter how clean, neither a nerve fibre more of an impression, no matter how healthy. If you will agree with us we will hear no more of hyperaesthesia of sensory nerve fibres or nerve peripheries.

Continuing our physiological survey we will notice the character of the various centres. In those of the lowest forms of animal organizations where we can trace nerve centres, or often only one nerve centre, it has been noticed that they receive impressions through nerve fibres and that responsive actions of the body take place without any evidence of feeling that impression in regard to either intensity or kind. These are called simple or excito-motor reflex actions. Man is endowed with similar centres, principally located in the spinal cord. They are entirely independent in their function if detached from other centres of a higher order, so that an impression conveyed to them through the afferent nerves will result in a reflex expression or motion, although the impression is not felt. The first centre is, however, connected with other centres by nerve fibres to and fro, which are called commissural fibres, and which will communicate the impression to the other centres or from these backward to the first; now, in man the other nerve centres are most complete, and are situated upward from the spinal cord, as much as we can infer, in the order of their importance. For convenience we will allow these centres to be of six kinds, usually mentioned by physiologists.

1. Simple excito-motor centres without sensation and appreciation.
2. Sensory centres, where an impression is actually felt, and cognizance thereof expressed by what is called the sensory motor reflex actions.
3. Centres of ideation, where the character of an impression is felt, whether hard, soft, cold, warm, agreeable or otherwise.
4. This idea of a sensation when carried to the emotional centre, produces through it an excited feeling according to the idea of the character of the sensation received, and according to the emotion, the so called ideo-emotional reflex actions occur.
5. The intellectual centre predominates over the judgment of relation of the impressions to others previously received, comprehends and knows their import, and therefore directs the intellectual reflex actions.
6. The will, has the reflex actions of the other centres under its control, and is therefore dominant.

This arrangement is probably arbitrary but practical, because, First, we receive an impression. Second, we feel it. Third, we form

an idea about it. Fourth, we are moved by it. Fifth, We analyze it. And, sixth, we do with it what we will.

All these centres are connected with each other by communicating or commissural nerve-fibres.

The locality of the ideational, emotional, intellectual and volitional centres is in the cerebral hemispheres, of the sensational centre in the pons varolii, and of the centres of simple excito-reflex action mainly in the spinal cord. When we isolate from above downward, these centres, one after the other, the manifestation of the functions of the centre so isolated is lost, while that of the centres below the isolation remains intact. Reflex motor action can take its origin in any of the centres controlled by any and all the centres of higher order, without any impressions received from without to stimulate it to action. Under the control of the will, or if you will by the stimulus of the will, we can without any further external impression, execute any motion, or act the same as if such external stimulus had been brought to bear upon the centre, which it would be necessary to use in that act. Hence it arises, that if for instance, one of the middle centres, say the ideational is stimulated, the impression is communicated upwards successively to the emotional, intellectual, and volitional centre, and the reflex action occurs backward, with its intellectual and emotional character to impress the reflex action of the ideational centre, that the latter's execution may be conformable with that character.

We will now only make one more physiological remark, namely, that there is another centre connected with commissural fibres with others, the cerebellum, which presides over the co-ordination and equilibration of muscular movements; also that the so called sympathetic nervous system, regulating the movements of vegetative organs, is *en rapport* with the other nerve centres.

As an apology for this condensed statement of physiological facts, we would state to you that our object was, as some point may have escaped your memory, merely to recapitulate such portions as have a direct bearing upon our investigations of "what is the matter" in Hysteria.

Hysteria is believed to be an affection of the nervous system. A departure from health of the nervous system, like that of any other organ, is manifested by a perversion or complete annihilation of its functions or part of them, no matter whether any physical changes are noticed in organs by instruments and other means in our power. A perversion of function of any organ shows itself in two ways: First, by exaltation. Second, by depression. Either state may occur in the nervous centres by an organic lesion therein, or by their natural influence over each other through the commissural fibres. Nerve-fibres can suffer by depression only, in which case an organic change, deteriorating their activity, must actually have taken place.

In order to arrive at the nature of the disease under consideration, let us examine the symptoms as far as they can be taken as evidence of a manifest perversion of the functions.

It is well known that the external expression of Hysteria is almost always one of excitement, or at least irritability of the motor, sensory and emotional organs, which we will speak of hereafter when describing the symptoms of exaltation ; nevertheless it seems the contrary is sometimes the case, which point is often very puzzling to a pathologist and also in the treatment of the disease. Among the motor functional disorders, that of depression is brought to our notice in the form of paralysis. *Paralysis* of the hysterical has the following peculiarities :

a. Either one muscle, one limb or if several only one side is usually affected. Paraplegia is rare and peculiar.

b. The paralysis ceases quite suddenly, very rarely progressively, and when the latter takes place, either previous attacks without hysteria have occurred or its present attack is not solely hysterical, but offers a complication with some organic disease.

c. The paralyzed parts can be made to contract when directly stimulated by electricity.

d. When the leg is paralyzed, integrity of the extensors of the toes is observed.

e. The nutrition is not affected.

Many deductions may be drawn from these peculiarities, the most important are the following :

The muscles affected retaining their irritability, shows that the source of paralysis is neither in the muscular tissue nor the motor nerves, but some nerve centre, and the frequency of only part of the muscular system being paralyzed indicates a localized lesion of some centre of nerves. The fact of frequent sudden resumption of activity of a paralyzed part will lead to a belief that the lesion cannot be a physical one, but more likely a psychical aberration of the ideal and emotional functions. By asserting this belief we wish it to be understood that we do not think the patient voluntarily refuses to move a limb, or so to speak feigns paralysis, but we do think that through the excitability of the sensory centre the impressions received have stimulated the ideational and emotional centres beyond their normal capacity, resulting in a perversion of the ideas and emotions, so that intellectual volition had to exercise its control conformably to the perverted ideas so received.

For instance, in paralysis of the leg, too many previously received impressions, improperly recognized, induced the idea that the limb lost its function, the emotion of which will induce the will to allow that emotion to take its course, hence the paralysis. The curiosity of paralysis of the whole leg, except the extensors of the toes, mentioned by Dr. J. R. Reynolds and Dr Todd is striking enough to quote here part of their observations : " She drags the palsied limb after her as if it were a piece of inanimate matter." " If an ordinary hemiplegic patient be made to walk it is seen that on attempting to raise the foot from the ground the toes droop and the leg is circumducted, but the hysterical patient does what the healthy person cannot help doing ; when making the attempt to walk she causes the ele-

vation of the great toe at the time of endeavoring to move the foot forward." "The paralytic patient looks at his feet, the hysteric patient looks at his observers." If we take additionally into consideration the continuance of normal nutrition in the paralyzed parts, we have to come to the conclusion that the seeming depression of motor power is really an *exalted emotion* of the individual's nerve centre which forces him or her to be lame.

We meet also with *sensorial* depression in this affection; in fact, partial or complete anesthesia is occasionally found among the symptoms of Hysteria. As rare as this state of things may be, we admit its occurrence, but would deduct immediately all such cases who cannot feel for the same reasons as the patient who cannot walk from the list of sensorial depression, and call them ideational and emotional exaltation. The cases remaining after deducting the above will be found to be only temporarily anæsthetic in some part and only after paroxysmal convulsions. It is possible that anesthesia of mucus membranes of the bladder and rectum produce, by want of stimulus for reflex action, the retention of feces or of urine which is not an unfrequent symptom of the hysterical. The back, the vagina, the dorsal surface of the hand are the most frequent seats of depression of sensibility.

Mental depression or Melancholia, when observed, can by close scrutiny be satisfactorily explained as not being that state of insanity to which these names are given. When we notice a hysterical patient to have a disposition to be alone, listless, and indifferent to surrounding objects or passing circumstances, we will soon find that it is due to an all absorbing subject in her mind, which, by the strong impression it has made on her mental faculties, bars the approach of anything else to the sensorium. The overactivity of one centre has concentrated all impressibility upon itself. Such oversusceptibility as will receive painful impressions, or rather which will make impressions by their intensity painful, can certainly not evoke a joyful disposition; the patient feels miserable through the ecstasy of a painful emotion, and therefore evinces symptoms of Melancholia. The remarks made here are not altogether applicable to the so-called Hysterical Insanity as treated in works on mental diseases. There the perversion of mind has arrived at a stage of permanency, while the Hysteria is only concomitant; in our discussion now, Hysteria is paramount and the melancholia a secondary symptom.

The crying spells of the hysterical, generally alternating or being synchronous with laughing, are explained by pathologists as a spasmodic contraction of those muscles which are active in producing either.

What has been said so far in regard to motor, sensorial or mental depression, was intended to convince that this depression is delusive, and that it can be traced to an actual overimpressibility of the sensorial, ideational and emotional centres, particularly the last, because it was the cause of the motor, sensory and mental perversions.

This leaves now a clear path to discuss the symptoms which show clearly an *exaltation of the nervous centres*. These are generally described as mental, sensorial and motorial; we will take them up separately, which is probably the most practical way.

Sensorial exaltations.—This so called hyperaesthesia is not only manifested by an acuteness of the special senses, but the general sensibility of the body is also affected. It may be, and often is, confined to one special sense, or one part of the body, but more frequently diffused, and can be excited into reaction by an outer stimulus, or by an act of the higher of the cerebral centres. To have a proper understanding of the state of feeling of a hysterical patient, it is probably best to imagine a state of nervousness, but in an uncontrollable and exaggerated degree. Whatever would remain unnoticed by a non-hysterical person during the ordinary walks through life, becomes an impressing subject to the hysterical. Every breath of air, every bright spot on a dress, every odor no matter how slight, or even the scratch of a pen upon paper, may become the source of annoyance, simply because the receptivity of the impressions from these objects is extraordinary in intensity; therefore the idea of pain, which is the origin of perverted emotions and intellectual manifestations, will produce by reflex motor influence muscular activity, convulsions, &c. Some one or two of the special senses are occasionally so acute that miraculous manifestations are not uncommon, and Niemeyer thinks that many of the clairvoyants are able to impose upon the public by being hysterical, with prominent symptoms of hyperaesthesia of special senses. We certainly see among that class of patients sometimes extraordinary manifestations of acuteness of some of the special senses, particularly the auditory and olfactory. Hysterical women recognize the steps of acquaintances far off, when yet inaudible to others, and are sometimes good meteorologic prophets, by simply sniffing the "morning air." But on the other hand, we cannot always believe many of the sensations as being real, and as we are not one of the unkindly thinking persons towards the "hysterical sex," we must attribute some of them to perverted imaginations and emotions. We must admit, when a person in health sees "*per nervum opticum*" a beautiful picture, he is so impressed by it, that for sometime afterwards, his ideal power is able to produce other beautiful pictures in his mind, which he *seems* to see; or, that a healthy person has the privilege to picture for himself, castles in the air, which under control of the will he takes as real for a while for his own pleasure, gratification and amusement. Why then is it not likely that a sick person, a nervous person, a hysterical woman can, will, and does fancy to herself, an equally beautiful picture, nay, a more beautiful one, as her emotional centre is in ecstasy, or built more and handsomer castles for her gratification? The only notable difference would be, that the former allows himself such a pleasure, because he knows he can under the imagination at will, while the latter's fancies being the production of a morbidly overactive nerve centre, overbalance the power and force of the will,

and consequently the imagination takes its course with that decided persistence so well recognized in the hysterical patient.

We here would state our view in regard to the reciprocal forces of the nerve-centres, as in this place it is most in sympathy with the peculiarities of hysterical symptoms. We read in nearly all works on our subject, that in this disease, "while there is a sensorial over-activity, we find weakness of volition." Now, we can hardly subscribe to that assertion, and we think the weakness is only a relative one. We believe the nerve centre of a higher order is endowed with just enough force to act correctly upon impressions such as have previously and habitually been presented to it by its inferior coadjutant. For instance, an impression is carried from the periphery of a sensory nerve to the spinal cord, but the latter being in an overactive functional state as a recipient, the irritation will be sufficiently strong to produce in the pons Varolii an *extraordinary intense sensation*; suppose the original stimulus to have been but a very slight touch of a sharp point, the overexcitability of the spinal cord will not only cause a correspondingly more violent reflex motion in the part stimulated, but the intense feeling as received by the pons Varolii will cause the reflex motion to be a quick one in response to the pain inflicted. But no pain was intended, and the exaggerated motion is therefore due to a perverted sensation in the pons Varolii, which was overbalanced by the irritation as received through the spinal cord. But matters do not stop here. The extraordinarily intense sensation is communicated to the ideational and emotional centres, which, unaccustomed to such an intense sharp impression by only a touch of a sharp object, make it out to be more than that, the idea and emotion say it must be a dagger, and the excito-motor and sensory motor reflex action is executed in accordance with the idea and emotion, namely, by a retraction of the limb in a direction opposite to the point of the dagger. The emotion, in telegraphic communication with the intellectual centre, is through its action impressed that the dagger is a dangerous weapon. The slight touch has thus produced this *extraordinary emotion* as stated, and it in turn overbalances therefore the usual judgment of the intellect, because the latter has received incorrect information through the emotion, and it is but a short step for the latter, by its analytical qualifications acquired by previous comparisons, to believe the dagger to be in the hands of some one. This belief results in a perverted stimulus of the intellect upon the organs of vision, *i. e.*, the corpora quadrigemina, which by their influence *dilate the pupil and behold a ghost*, a man with a dagger. The will is appealed to, and the reflex motion has been ordered to be not a simple motion of the limb pricked, but after a retraction from the point of the imagined dagger, also a flight from the man with frightened features, dilated pupils, anxious cries, &c.; but these "gradatim" increased reflex orders overcome the endurance of the minor reflex centres: the spinal cord, &c., is becoming disordered in

its function, the patient has lost her equilibrium, falls and convulsions take place.

Excuse me for this "hysterical novel." As for us, we are looking for our smelling bottle, and exclaim with Martin Luther, "I could not do otherwise, Amen!"

In this way of reciprocal dependence our nerve centres often lose their independent force, and sensorial exaltations become uncontrollable, hence the symptoms of the hysterical are sometimes problematic, and frequently lead to the conclusion that they are feigned. That such is sometimes the case, we do not doubt, but it is generally a sick feign, the pretending to be what there is not is due to a perverse ideo-emotional exaltation.

If we mention a few more of the characteristic hyperæsthetic symptoms this may, by calmly examining their curious features, become more apparent. Over sensitiveness of the vagina for instance is often complained of, but an examination per speculum reveals neither congestion or inflammation of the mucus membrane, nor abnormal discharges, or any causes which might make the organ irritable. Palpitation of the heart is a frequent alleged symptom, but the physician finds the heart's action normal and the pulse regular. The faintest noise is complained of as painful, but the patient makes an intolerable noise one minute afterwards by raking the fire, &c.

Idiosyncrasies are not uncommon. The hysterical may object to the blue color, or refuse anything sweet, or dislike a fruit previously indulged in, or have no scenting flowers in the house, &c. It is a curious fact that when the patient's attention is drawn to anything known to be disagreeable to her, the imagination is immediately aroused; if for example she is known to object to flowers, and one is said to be in the room, the very mention of the word "flower" will provoke an idea of bad smell and the flower must be removed, although that flower may have been in the room, not noticed by her, for several hours. The exalted idea of the smell of flowers being disagreeable is aroused, and the olfactories are enslaved to the torture.

Neuralgic pains of all kinds are also frequent symptoms. Prosopalgia, mastodynia, ischias, hemicrania, pain in the back, in the coccyx, in the epì—or hypogastrium, the top of the head, near the heart, in the joints. Even the ordinary physiological acts of life, such as breathing, micturition, defecation, peristaltic motion of the intestines are represented as painful. There is no doubt that these complaints are mostly of central origin either directly as a sensory manifestation or through contractions of involuntary muscles, of which the, so called, *globus hystericus* is a further instance.

The sceptics, who might believe it impossible that a mental emotion can produce pain at the periphery, we would refer to the case quoted on page 237 of Bucknill and Tuke's *Psychological medicine*, where an *intelligent* lady, seeing the danger of a little boy having his ankle crushed by a heavy iron swinging gate became so excited with fear of the boy getting hurt, that she was confined in bed for many days with a painful swollen ankle of *her* foot.

It is unnecessary to mention any more symptoms of morbid irritability of the nerve centres. Their name is "legion" and their variety what ever the human mind can invent.

The motorial exaltations are almost as varied, and when reaching the convulsive point, range from simple twitches of certain muscles, one or more, to general tonic or clonic spasms, but always without loss of consciousness. Sometimes convulsions never occur, but the patient is otherwise restless and fidgety, either walking about, or acting caricatures, or working their fingers and the like.

Convulsive paroxysms are generally preceded by extraordinary restlessness, exaggerations of previous complaints, laughing, intermingled with crying, and other manifestations, when the patient suddenly stops, (but invariably at a suitable place,) generally folds up her clothes so that they should not be deranged, looks around to be sure that somebody is near, then lets herself drop, avoiding all circumstances that might make the fall a hurtful one, and gets what is vulgarly called into hysterics, *i. e.* convulsions. The intensity of these are varied, sometimes mild or again violent, tonic or clonic, lasting from a few minutes to many hours. When tetanic they may be backward, sideward or straight, (*Opisthotonos*, *Pleurosthotonos*, *Orthotonos*). The eyes are generally wide open and fixed, but if carefully watched will be noticed to turn occasionally towards something that attracts the patient's attention, but only slowly and for a short time to resume again the fixed gaze. Whether the spasms are tetanic or not, they often may attack only one or two limbs, generally the arms, or they may solely affect the involuntary muscles, or a group of voluntary and involuntary muscles which by combined action produce phenomena, such as hiccup, eructation, movements as if vomiting or swallowing, or by contractions of the muscular coats of the intestines pain, by spasms of the œsophagus, the *globus hystericus*, by that of the respiratory group, heavy breathing, etc. At times the spasms are confined to the muscles of the face, producing emotional expressions of all kinds, distressing contortions, as well as laughs, cries and other theatrical manifestations. In rare instances the character of the spasms is cataleptic.

When the paroxysm is over, the patient is much exhausted, and the mind remains occasionally unbalanced for a short time. Paralysis, although generally only temporary, sometimes follows, affecting one or several parts of the body, paraplegia being comparatively rare.

The paroxysmal state of convulsions, particularly when the latter are clonic or alternating with tonic spasms, is the only period of hysteria when it might be confounded with other diseases. And scarcely that, except it might be epilepsy. Should we meet with one in hysterical convulsions and not have known the person's previous pathological history, the main diagnostic point will be whether the patient has or has not lost consciousness. Even in the apparent coma we never find loss of consciousness in Hysteria, while in epilepsy we always find it. In Hysteria, as Dr. Reynold quaintly says, "the pa-

tient not only sees, but looks." Besides, the fall is not as sudden as in Epilepsy and more theatrical; when screaming before the fall it will be a natural voice and appears to be intended to draw the attention of others to what is to come, in Epilepsy the scream is wild and characteristic; if she foams at the mouth it will be noticed to be due to a spluttering at the mouth similar to a playful infant; there is no strabismus as is often found in Epilepsy; although the breathing may be disordered in Hysteria, asphyxia never occurs. It is said etherization immediately removes the convulsions when carried to a point of anæsthesia.

This brings to our mind the circumstance that ether, when slowly administered by an overtimid physician, always calls forth in the subject many symptoms similar to the hysterical before complete anæsthesia is reached. We notice first the excitement of the nervous system, the droll expressions and talkativeness of many, the motorial excitement with disposition to leave the operating table or bed, the gradual loss of the volitional force over the intellectual, or better, the over excitement of the emotional sphere outbalancing the will and intellect, followed by stiffness of the muscles, stertorous breathing, spluttering of the mouth, &c., *complete* anæsthesia following *after* all that. As the comparison of the symptoms between Hysteria and etherization may turn out favorable, in that ratio may we be allowed to make deductions in regard to the nerve centres involved primarily in either. Would it not lead us to think that the ideation and emotional precede the sensorial and motorial?

The symptoms of *mental exaltation* offer such an inconsistency in their very nature, that, when observing them, the question of genuineness naturally arises. But when we again remember the involuntary expressions of motorial and sensorial excitement and the previous intelligence and integrity of some of the patients, we are obliged to banish such suspicions from the mind. Here we meet with one who cannot bear the reading of usual daily accidents, as related in the morning papers, without the deepest impression of gloom and visionary horror as if the accident were occurring before her very eyes; on the other hand, the mere mention of some name or thing with which the patient's exaggerated ideation and emotion can connect or remember something ridiculous will arouse a shout of laughter almost simultaneously with the mental depression. We find an overirritability of the psychical centres even over and above the physical. The very fact that they can be so aroused by an exaggerated sensorial impression proves their great irritability, for, in health, we know the psychical functions are more or less controlling the minor centres and not prone to give themselves up too easily. The natural consequence is, that the mental symptoms are not only various, but fluctuating, not only singular, but inconsistent. How is it then possible for the hysterical to evoke sympathy from those around her who do not understand the nature of the mental alienation? And when such want sympathy is seen by the patient, an exaggeration

of the unnatural is evidently the result, thus making one misfortune react upon the other. All these things combined make her very unhappy, and as the volitional force seems to her inadequate to meet the emergencies she naturally despairs of every method to make her well, and seeks constantly for new aid to alter her fate. Thus it arises that the hysterical complain of things unnatural so as to attain what would be, as they think, of comfort to them. Symptoms as the following can often be explained by what we have said: Inability to stand; wild gesticulations to communicate wandering ideas in her mind; violent talking on visionary circumstances; marvelous adaptation of her own ideas and feelings to what she hears expressed by others; the idea that she is different from others and that ordinary means of restoration are not applicable to her, hence the opposition to any attempt of others to soothe her, or to any suggestions to change her condition. It is sometimes easy to change such vagaries by adroitly making an impression which is stronger and in an opposite direction to the motives; for instance, we have seen a person who asserted an inability to walk to get up and prevent another from leaving the room, upon jealousy having been aroused, by insinuating that the respective individual was going to see some one in which the patient had an interest. In short, the overactivity of the ideational and emotional centres induce the patient to believe that possible things become impossible to her, and she is therefore actually temporarily unable to execute the possible until a stronger stimulus to these centres diverts her activity in another direction. Vice versa, that same overactivity often allows the patient to execute motions and acts which would be impossible for her to do if in a normal state of health.

Other *general symptoms*, aside from the nervo-motor manifestations, are equally puzzling. This arises from the many false statements received from the patient. We believe that nearly all the general symptoms are referable to the patient's constitution and diathesis outside of the hysterical state. Some enjoy perfect health otherwise, while others show some, although generally slight, derangement in other organic functions than the nervous. Some of these can be traced to be the direct result of overactivity of the nervous system, among which is a determination of blood to various parts of the system, particularly the kidneys, resulting in an excessive secretion of a limpid urine with a diminished quantity of solid constituents. The extremities are usually cold, while the face is flushed with a sensation of heat. But as the nervous symptoms constantly fluctuate, so do the others, and the very reverse occasionally appears. As a general rule the health of the hysterical is, as long as it has not grown to be an inherent ailment of the body, tolerably good. When Hysteria has become a persistent affection of the individual, it will derange the functions of se—and excretions and of digestion, and, as stated once before, may lead to chronic alienation of the mind, epilepsy, &c. That the generative organs are often out of order we do not deny, but when

we take into consideration that hysteria is comparatively rare among the country women, and that derangements of the female reproductive organs, are, alas, but too frequent among women in the cities, particularly the wealthier classes, we can hardly attribute these disorders to hysteria, neither are we prepared to assert that they are frequently the cause of it.

Among the *causes* of Hysteria, as we find them recorded in works on the subject, there are many mentioned which can scarcely be called such, but which are merely circumstances in life, occurring to all of us, hysterical or not. Before taking them to account separately, it is necessary for us to state that we do not second a hereditary cause or congenital disposition. As we lay this statement before you as simply our *opinion*, we will not enter into arguments about it, except to state in opposition to statistic assertions, that it should not be forgotten every member of the human family afflicted with hysteria must have had a mother, and that if the disease is set down as hereditary it must most likely have been *that* mother who has impressed the fetus with *that* taint. Do they who assert this opinion place no weight upon the histrionic examples such a mother gives to one, whose age develops a fondness for theatres? Many rehearsals make a good actor!

Ser.—By what we have stated before, it will be seen that although hysteria is very common in women, and very rare in boys or men, it is not the sexual organs which causes the disease. A woman between the age of puberty and that when generative functions cease, is by reason of her habitual relation to such surrounding circumstances as are coadjutant with that time more exposed than a male to influences calculated to excite her ideations and emotions. If married, the anxieties about her children, husband, household,—if single, the anxiety to get married and other old-maidish propensities are sometimes sufficient causes to disturb the nervous equilibrium, even if we do not take into account that she is “*de natura*” weaker in nervous constitution than the male. The manner of bringing up a female child, her education and employment as such, the storm of puberty, and occasionally the precepts of a mother act upon the nervous centres which are at that time in a state of development, as like too much rain on a ripening grape, the fruit will be watery and sour. When we further take into consideration that the want of open-air exercise of the kind as a boy has, during a girl’s period of development, will not give the nervous system the requisite strength to withstand the future trials the female is likely to meet, coincident with her sexual changes and accidents to her reproductive organs, we can account for the development of hysteria in the weaker sex. Some authors even deny this disease ever to occur in man. We believe that when this curiosity takes place, the male is a psychical hermaphrodite. Any one having met with cases of hysteria in men, and also read some of the medico-legal chapters treating of criminal unnatural lewdness, may coincide with us in placing such hysteric men among those mysteries of

humanity who practice actively, and more frequently passively, pæderastia.

Age.—It is well known that between the age of 12 and 25, nature puts on her finishing touches to the human being. What has previously gone through the vegetative process, must then go through the animal development. Bones become firm, muscles strong, nerves steady, and *the mind receives a determined direction*. But in the latter case, the physical growth of the nerve-centres and the muscular tissues continues. Now, we know that during this time of mental development, the young female is exposed to more unaccustomed stimuli and impressions, comes more in contact with circumstances which must act on her ideas and emotions, and meets with more strange and impressive incidents of life, than at a maturer age. Is it then to be wondered at, that this brain, growing and developing itself under the pressure of excitement, will ultimately become an excitable brain? Can we stand astonished that the demonstrations of mental force are of an emotional character, when its organ has grown among emotions, fancies and excitements? We will find that in the young hysteric female, the psychical, not the physical; the emotional, not the sensorial forces have been overtaxed during their development. Among a record of 350 cases of Hysteria, only 25 began after the 40th year.

In regard to *temperature, climate and season*, as a cause, we may state, that at the *laziest* time, temperature and climate, and also when and where the electric tension of the atmosphere is greatest, hysteria comparatively abounds. As to the manner of *occupation* having any influence on the development of this disease, we must adhere to the opinion of others. *Nothing to do* is tantalizing, and *too much to do* equally so. We do not know what to do with either; hence a *reasonable amount* of occupation will do much toward averting the malady.

Menstruation, whether regular or abnormal, cannot be said to be influencing or developing Hysteria. Rather the opposite may be stated. Regular monthly functions are the dominant sanitary thought of women; their *anxiety* about it may therefore add fuel to the fire, but not the function itself.

Mental and moral excitement of any kind are the most frequent exciting causes we know. All specialities on their character we omit, as they in their degree of causation are dependent on the character of the recipient.

So far, we reviewed the most commonly known assisting circumstances in the causation of this disease. A real pathological point as the fulcrum upon which the determining causes can act, has been avoided by authors. We have expressed ourselves upon the matter at various parts of this lecture, and hinted several convictions we have arrived at. The inferences and deductions which we made, whether by physiological or pathological investigation, must result in the declaration that the *nature and cause of Hysteria* is: "A morbid irritability of the ideational and emotional-motor reflex centres of the nervous system, caused by their development under pressure of co-existing emotional influences."

Taking this as the corner stone, the *Treatment* will be more a preventative than a direct one, by avoiding all the determining circumstances. The greatest portion of our prophylactic treatment will, therefore, fall in the period of development. It is not necessary to specify here the measures which should be employed, as they are sufficiently evident by what has already been stated under the head of causes.

When the disease is already developed attention must be paid to any accompanying ailment of the patient, particularly if that ailment be a source of irritation. Any disease of the uterus or vagina must be corrected by the respective means at our command. Should the general health be poor, anæmia or chlorosis prevail, our tonics, iron and a sagaciously chosen diet become necessary. General good nutrition of the whole system should be the desirable object. Change of locality, particularly from the city to the country; suitable, joyful and intelligent companionship; some employment with which to divert the mind without overtaxing it, together with moderate employment of the muscular system at something of interest to the patient; avoidance of all subjects which are of emotional character; such are the main points the patient should have the benefit of. In regard to the moral treatment, it may be said that rough and forced opposition is not to be recommended; on the other hand the patient ought to be treated firmly, and all means used to induce her to exercise her full power of will over existing annoyances, but not to show too much sympathy by admitting all she says and does.

Medicines, particularly the so-called nervines, may be employed with the hope of relief. Nearly every physician favors one or the other of this good and bad smelling sort. We have found much benefit derived from *Moschus Artificialis*, also *Cimicifuga* (*Actea Racemosa*.) *Dr. Von Niemeyer* used successfully the Chloride of Gold and Sodium. We have found that hysteric patients are more benefited by small doses frequently repeated than large ones. It has come to our notice that occasionally a hysteric female is subject to cutaneous eruptions, especially one of the forms of Herpes, when we have observed that the fits invariably appeared when the herpes disappeared by external application; we resorted then to internal remedies, such as Sulphur, Arsenic, Bromide of Potassium, Dulcamara, etc., and found that if the herpes could be thus cured, the hysteric symptoms abated to a considerable extent simultaneously. When the convulsions approach the epileptiform character Bromide of Potassium is recommended.

NOTE.

The foregoing Lectures were delivered in the Amphitheatre of Charity Hospital, before the House Physicians and their Assistants, and the pupils of the School for Nurses connected with the Institution.

We do not claim an entire originality, and have borrowed from authors whenever necessary.

A few copies are printed solely for the Staff of our Hospital.

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